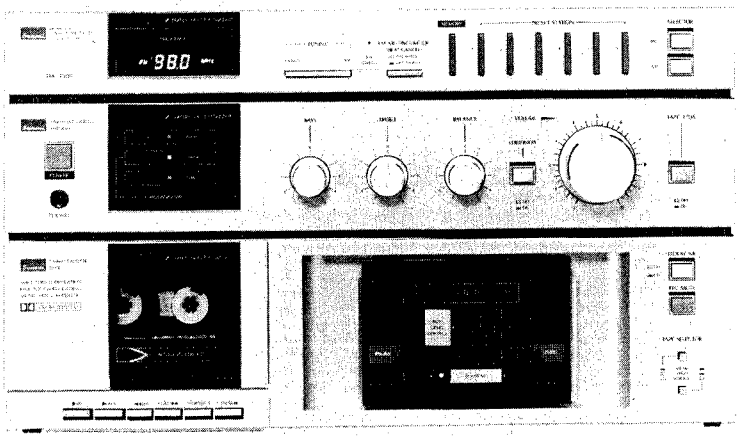
SERVICE MANUAL

DA-T500 Hi-Fi System

QUARTZ PLL SYNTHESIZER AM/FM STEREO TUNER
STEREO INTEGRATED AMPLIFIER
STEREO CASSETTE DECK

SANSUI DA-T500/T500L

(Silver & Black Model)



CAUTION

1. Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

Tuner/amplifier/cassette deck: DA-T500

Audio section

Power output
Min. RMS, both channels driven, from 40 to 20,000 Hz with no more than 0.5% total harmonic distortion
30 watts per channel into 8 ohms

Total harmonic distortion
..... less than 0.5% at or below rated min. RMS power output

Frequency response (at 1 watt)
..... 10 to 50,000 Hz, +1 dB, −3 dB

Signal to noise ration (short-circuit, A-network)
PHONO ..... 73 dB
TAPE-2 ..... 90 dB

FM section

Tuning range ..... 88 to 108 MHz
Usable sensitivity
Mono IHF ..... 10.8 dBf (1.9 μV: T-100)
DIN ..... 1.0 μV
50 dB quieting sensitivity
Stereo ..... 37 dBf
Signal to noise ratio (at 65 dBf)
Stereo ..... 70 dB
Distortion (at 65 dBf)
Stereo ..... less than 0.35% at 1,000 Hz
Stereo separation ..... 40 dB at 1,000 Hz

AM section

Tuning range
<DA-T500> ..... 530 to 1,600 kHz
<DA-T500L> ..... MW: 530 to 1,600 kHz
LW: 153 to 360 kHz
Usable sensitivity (Loop antenna)
<DA-T500> ..... 56 dB/m (630 μV/m)
<DA-T500L> ..... MW: 56 dB/m (630μV/m)
LW: 64 dB/m
Signal to noise ratio ..... 45 dB

Tape section

Track format ..... 4-track/2-channel system
Wow/flutter ..... 0.09% max (WRMS)
Signal to noise ratio (recording/playback with metal tape)
DOLBY NR OFF ..... Better than 58 dB
DOLBY NR ON ..... Better than 68 dB (above 5 kHz)
Frequency response (−20 VU recording/playback)
Normal Tape (LH) ..... 20 to 15,000 Hz (30 to 14,000 Hz ± 3 dB)
Chrome tape ..... 20 to 16,000 Hz (30 to 15,000 Hz ± 3 dB)
Metal tape ..... 20 to 16,000 Hz (30 to 15,000 Hz ± 3 dB)
Power requirements ..... 120/220/240V 50/60 Hz
For U.S.A. and Canada ..... 120V (60 Hz)
Power consumption
<DA-T500> 130W
<DA-T500L> 180W
Dimensions ..... 430 mm (16-15/16″) W
253 mm (10″) H
245 mm (9-11/16″) D
Weight ..... 6.0 kg (13.2 lbs) net
7.1 kg (15.7 lbs) packed

* Design and specifications subject to change without notice for improvements.
* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double D symbol are trade marks of Dolby Laboratories Licensing Corporation.

CAUTION

1. The symbols, UL, CSA, BS, UK, EU, AS and XX on the parts list and the schematic diagram mean followings respectively.

   UL..... Manufactured for U.S.A market.
   (Underwriters Laboratories approved model.)
   CSA..... Manufactured for Canadian market.
   BS, UK ..... Manufactured for United Kingdom market.
   EU ..... Manufactured for European market.
   AS..... Manufactured for Australian market.
   XX..... Standard Version.
   NON MARK ..... Common Parts.

2. Some printed circuit boards are not supplied as the assembled. To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.

3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

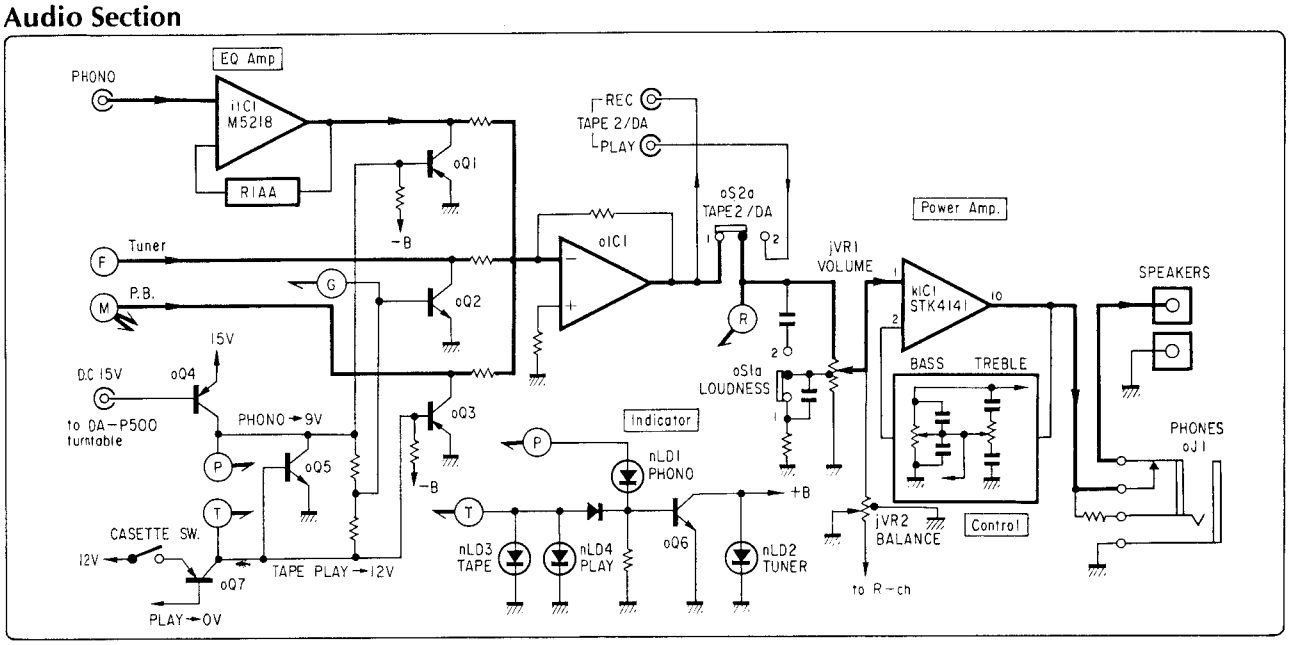
4. Abbreviations in this service manual are as follows.

•Abbreviations List

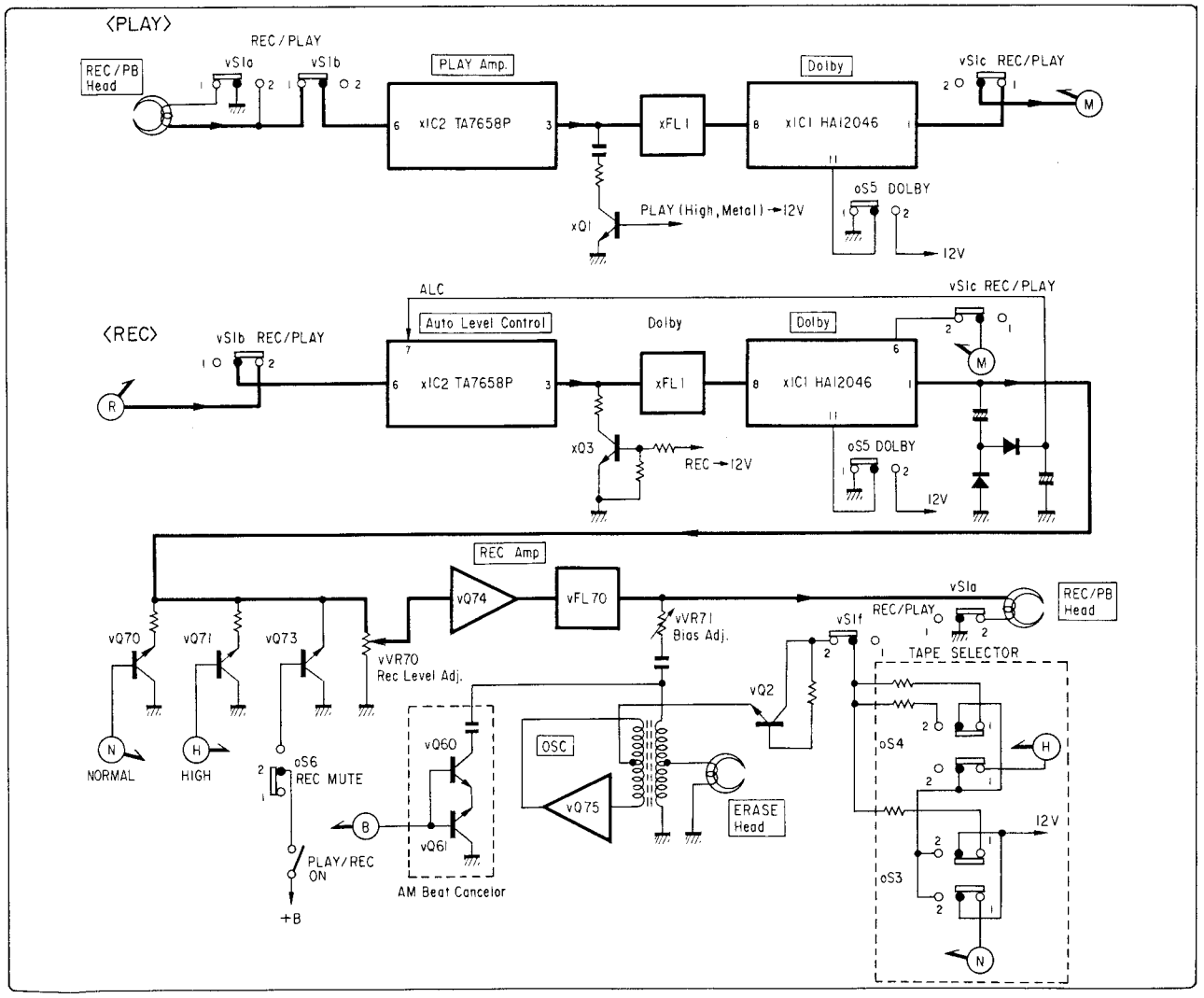
C.R.	: Carbon Resistor	E.B.	: Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor		
Ce.R.	: Cement Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
M.R.	: Metal Film Resistor		
F.R.	: Fusing Resistor	Ta.C.	: Tantalum Capacitor
N.I.R.	: Non-Inflammable Resistor	F.C.	: Film Capacitor
A.R.	: Array Resistor	M.P.	: Metalized Paper Capacitor
C.C.	: Ceramic Capacitor	P.C.	: Polystyrene Capacitor
C.T.	: Ceramic Capacitor, Temoerature Compensation	G.C.	: Gimmic Capacitor
		A.C.	: Array Capacitor
E.C.	: Electrolytic Capacitor	V.R.	: Variable Resistor
E.L.	: Low Leak Electrolytic Capacitor	S.V.R.	: Semi Variable Resistor
		SW.	: Switch

1. BLOCK DIAGRAM

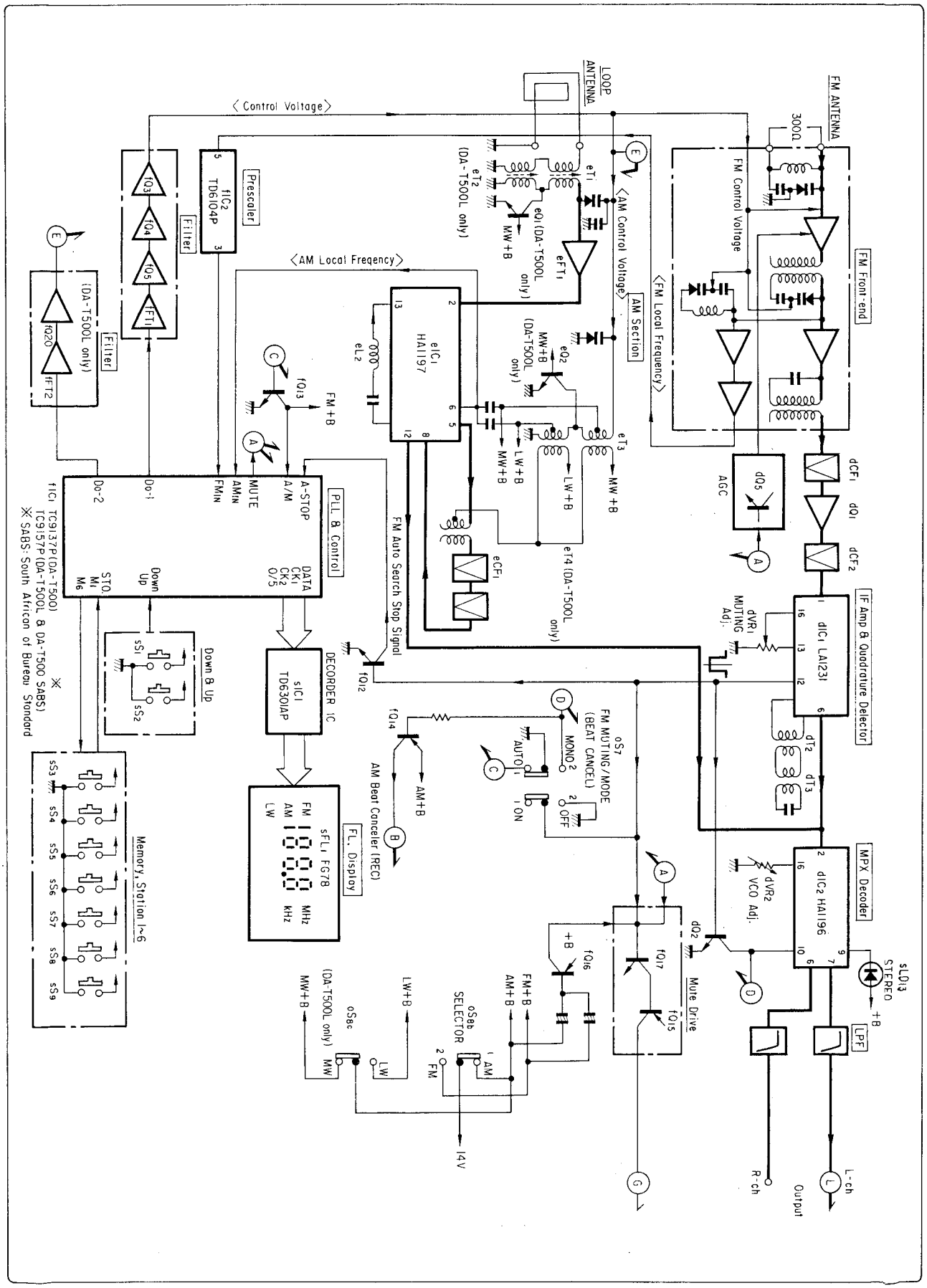
1-1. Audio Section



1-2. Tape Section



1-3. Tuner Section



2. DESCRIPTION OF PLL SYNTHESIZER & THE CONTROL IC

• Terminal Function of LSI-TC9137P

Pin No.	Symbols on sub-state	Functions
2,3	X_T $\overline{X_T}$	Terminals to connect a quartz oscillator for generating a reference frequency.
4,5	B_1 B_2	Terminals to input a signal for switching FM/AM band and a signal for selecting the IF fine tuning in FM receiving. B_1 B_2 0 0 AM 1 0 FM (10.7MHz−50K) 0 1 FM (10.7MHz+50K) 1 1 FM (10.7MHz)
6,7	E_1 E_2	Terminals to input a signal for selecting destinations of Japan, USA, and Europe. E_1 E_2 Mode 0 0 – 1 0 Japan 0 1 USA 1 1 Europe * Inputs of terminals E_1 and E_2 are read and latched in $\overline{INH}$=L state and in FM/AM switching.
8	OSC	Terminal to connect a condenser and resistor for the oscillator for determinating the speed of automtic search operation. The automatic store-release in the preset memory unit and the conversion period to fast forwarding in manual selection of broadcasting stations are determined according to this oscillation frequency.
9	A/M	Terminal to input a signal for switching the manual operation to automatic search operation or vice versa in the UP/DOWN tuning mode. "H": Automatic, "L": Manual
10,11	$\overline{UP}$ $\overline{DOWN}$	Terminals to input a signal from the tuning key. * In manual operation: When the key is kept depressed for 0.3 sec or more in one-step/one-push step feeding, the operation changes to fast forwarding; when the key is released, the operation stops at the next stop. In this case, even if there is a station on the way, the station is neglected. * In automatic search operation: When the key is depressed once, the automatic search operation starts and stops automatically after having selected the desired station. * A pull-up resistance is provided therein.
12	A-STOP	Terminal to input a signal for performing the automatic search stop. When a "H" level signal is applied to this terminal during automatic search operation, the scanning operation stops.
13	$\overline{STO}$	Terminal to input a signal for storing data in the preset memory unit. Input/output terminal in which a LED driver is provided. * When depressing the STO key, the STO lamp comes on. Next, when any desired memory No. key is depressed, the data on receiving frequency is written into the memory unit and the STO lamp goes off. * When the STO key is depressed and the meory No. key is not depressed, the frequency data is released automatically.
14~19	$\overline{M_1}$~$\overline{M_6}$	Terminals to input a signal for designating memory addresses. Input/output terminals in which a LED driver is provided. * Terminals M_1 to M_6 designate the addresses of FM memory unit in FM receiving and the addresses of AM memory unit in AM receiving. * When depressing the STO key and any desired station key of M_1 to M_6, the data is written into the memory unit. * When depressing any desired station key of M_1 to M_6, the data is read out.

Pin No.	Pin Name	Functions
20~23	CK-1, CK-2, Data, 0/5	Terminals to output the data for displaying the received frequency digitally and a timing signal. The data fed to the driver TD6301P for displaying a static frequency and the timing signal are outputted once only when the frequency is updated in such case as when the power supply is tuned on, the UP/DOWN key is depressed, the automatic scanning operation is made, the data are read out of the memory unit or FM/AM is switched. In the ordinary receiving state, this terminal is fixed to a "L" level. * Data: Binary coded frequency data and receiving band. * CK-1, CK-2: Initialize and transfer clock signals. * 0/5: For displaying 50 kHz during FM receiving in Europe.
24~27	$\overline{L_1}$~$\overline{L_4}$	Terminal to output a signal for driving the LEDs for displaying the linear scale on a received frequency. The LEDs are driven in push-pull connection with the terminals H_1 to H_5. 18 points at its maximum.
28~32	H_1~H_5	Terminals to output a signal for driving the LEDs for displaying the linear scale on a received frequency. The LEDs are driven in push-pull connection with the terminals L_1 to L_4.
33,34	D_0-1 D_0-2	Terminals to output a signal from a phase comparator. These terminals can be used for FM and AM, separately, since the same signal is outputted from the terminals D_0-1 and D_0-2 at the same time.
35	Pee	Terminals to output a signal for generating a sound "Pee" to confirm that the key is depressed correctly.
36	Mute	Terminal to output the muting signal. The terminal is kept in "L" level in ordinary state, and in "H" level in muting.
37	FM_{IN}	Terminal to input a signal from the FM programmable counter. An amplifier is provided in the input.
38	PSC	Terminal to output a signal for controlling the Prescaler IC of TD6104P.
39	AM_{IN}	Terminal to input a signal from the AM programmable counter. An amplifier is provided in the input.
40	$\overline{INH}$	Terminal to input a signal of inhibit. Ordinary operation in "H" level; inhibit operation in "L" level.
41	$\overline{TEST}$	Terminal to input an initialize signal. This terminal changes to H level in the ordinary operation and to L level in the initialize operation.
1,42	GND, V_{DD}	Power supply terminals, 5V±0.5V

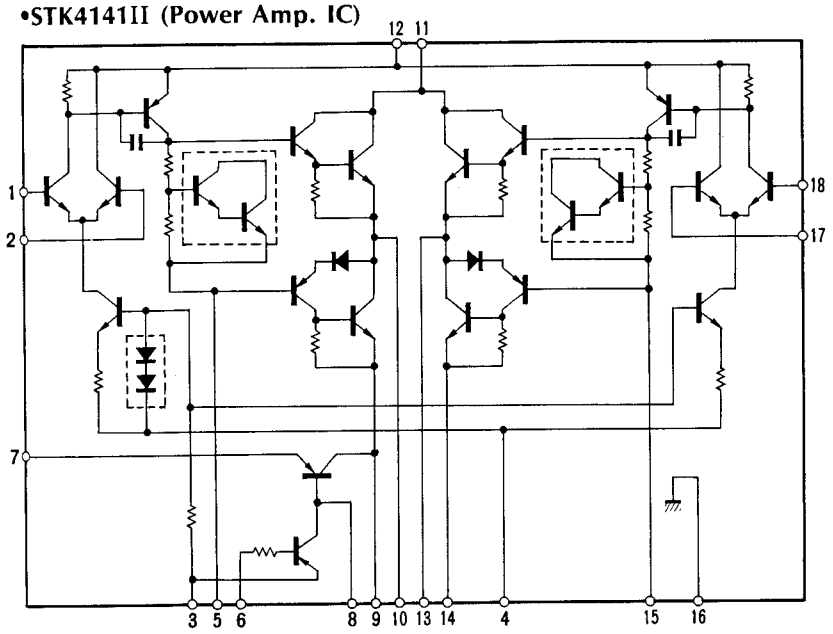
• Terminal Function of LSI-TC9157P

Pin No.	Pin Name	Functions
2,3	X_T $\overline{X_T}$	Terminals to connect a quartz oscillator for generating a reference frequency.
4 5 6	FM MW LW	Terminals to input a signal for switching FM/MW/LW band.
7 8	MANUAL AUTO	Terminal to input a signal for switching the manual operation to automatic search operation or vice versa in the UP/DOWN tuning mode. "H": Automatic, "L": Manual
9 10	UP DOWN	Terminals to input a signal from the tuning key. * In manual operation: When the key is kept depressed for 0.3 sec or more in one-step/one-push step feeding, the operation changes to fast forwarding; when the key is released, the operation stops at the next stop. In this case, even if there is a station on the way, the station is neglected. * In automatic search operation: When the key is depressed once, the automatic search operation starts and stops automatically after having selected the desired station.
11	STO	Terminal to input a signal for storing data in the preset memory unit. Input/output terminal in which a LED driver is provided. * When depressing the STO key, the STO lamp comes on. Next, when any desired memory No. key is depressed, the data on receiving frequency is written into the memory unit and the STO lamp goes off. * When the STO key is depressed and the memory No. key is not depressed, the frequency data is released automatically.
12 〜 17	M1 〜 M6	Terminals to input a signal for designating memory address. Input/output terminals in which a LED driver is provided. * Terminals M_1 to M_6 designate the addresses of FM memory unit in FM receiving and the addresses of AM memory unit in AM receiving. * When depressing the STO key and any desired station key of M_1 to M_6, the data is written into the memory unit. * When depressing any desired station key of M_1 to M_6, the data is read out.
22 23	OSC 2 OSC 1	Terminal to connect a condenser and resistor for the oscillator for determinating the speed of AM automatic search operation. Terminal to connect a condenser and resistor for the oscillator for determinating the speed of FM automatic search operation.
24 25 26 27	0/5 CK2 CK1 DATA	Terminals to output the data for displaying the received frequency digitally and a timing signal. The data fed to the driver TD6301P for displaying a static frequency and the timing signal are outputted once only when the frequency is updated in such case as when the power supply is tuned on, the UP/DOWN key is depressed, the automatic scanning operation is made, the data are read out of the memory unit, or FM/AM is switched. In the ordinary receiving state, this terminal is fixed to a "L" level. * 0/5: For displaying 50 kHz during FM receiving in Europe. * Data: Binary coded frequency data and receiving band. * CK-1, CK-2: Initialize and transfer clock signals.

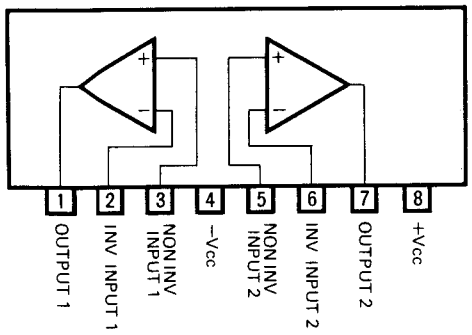
Pin No.	Pin Name	Functions
28	MUTE	Terminal to output the muting signal. The terminal is kept in "L" level in ordinary state, and in "H" level in muting.
29 30	E2 E1	Terminals to input a signal for selecting destinations of Japan, USA, and Europe. E_1 E_2 Mode 0 0 Japan 1 0 Europe 0 1 USA (MW 9kHz) 1 1 USA (MW 10kHz) * Inputs of terminals E_1 and E_2 are read and latched in INH = L state and in FM/AM switching.
31	STOP 3	When a IF450 kHz signal is applied to this terminal during automatic search operation, the scanning operation stops.
32	STOP 2	Terminal to input a signal for performing the automatic search stop. When a "H" level signal is applied to STOP 1 and this terminal during automatic search operation, the scanning operation stops.
33	STOP 1	Terminal to input a signal for slowing the speed of scanning operation. When a "H" level signal is applied to this terminal during automatic search operation, the speed of scanning operation halves.
34 35	D_0-2 D_0-1	Terminals to output a signal from a phase comparator. These terminals can be used for FM and AM, separately, since the same signal is outputted from the terminals D_0-1 and D_0-2 at the same time.
36	TEST	Terminal to input a signal of test mode. Test mode in "H" level.
37	FM_{IN}	Terminal to input a signal from the FM programmable counter. An amplifier is provided in the input.
38	PSC	Terminal to output a signal for controlling the Prescaler IC of TD6104P.
39	AM_{IN}	Terminal to input a signal from the AM programmable counter. An amplifier is provided in the input.
40	$\overline{INH}$	Terminal to input a signal of inhibit. Ordinary operation in "H" level; inhibit operation in "L" level.
41	INT	Terminal to input an initialize signal. This terminal changes to H level in the ordinary operation and to L level in the initialize operation.
42 1	V_{DD} GND	Power supply terminals. 5V ± 0.5V.

3. INTERIOR BLOCK DIAGRAM OF IC

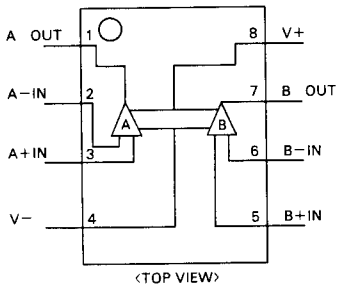
•STK4141II (Power Amp. IC)



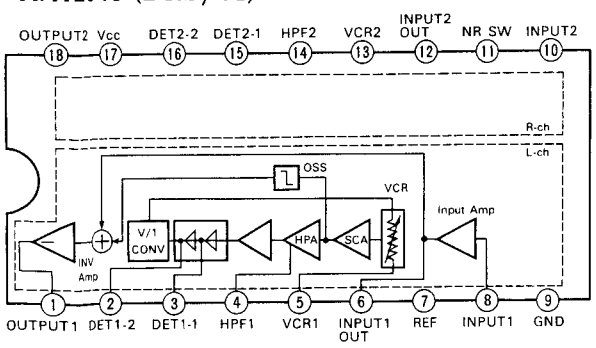
•M5218L (Audio Pre Amp. IC)



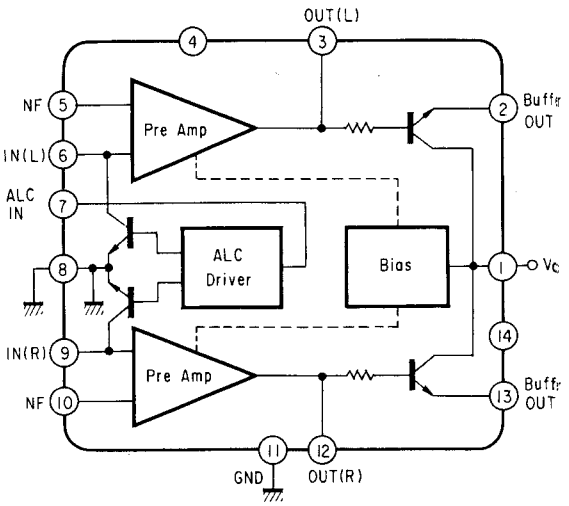
•NJM4558D (Operational Amp. IC)



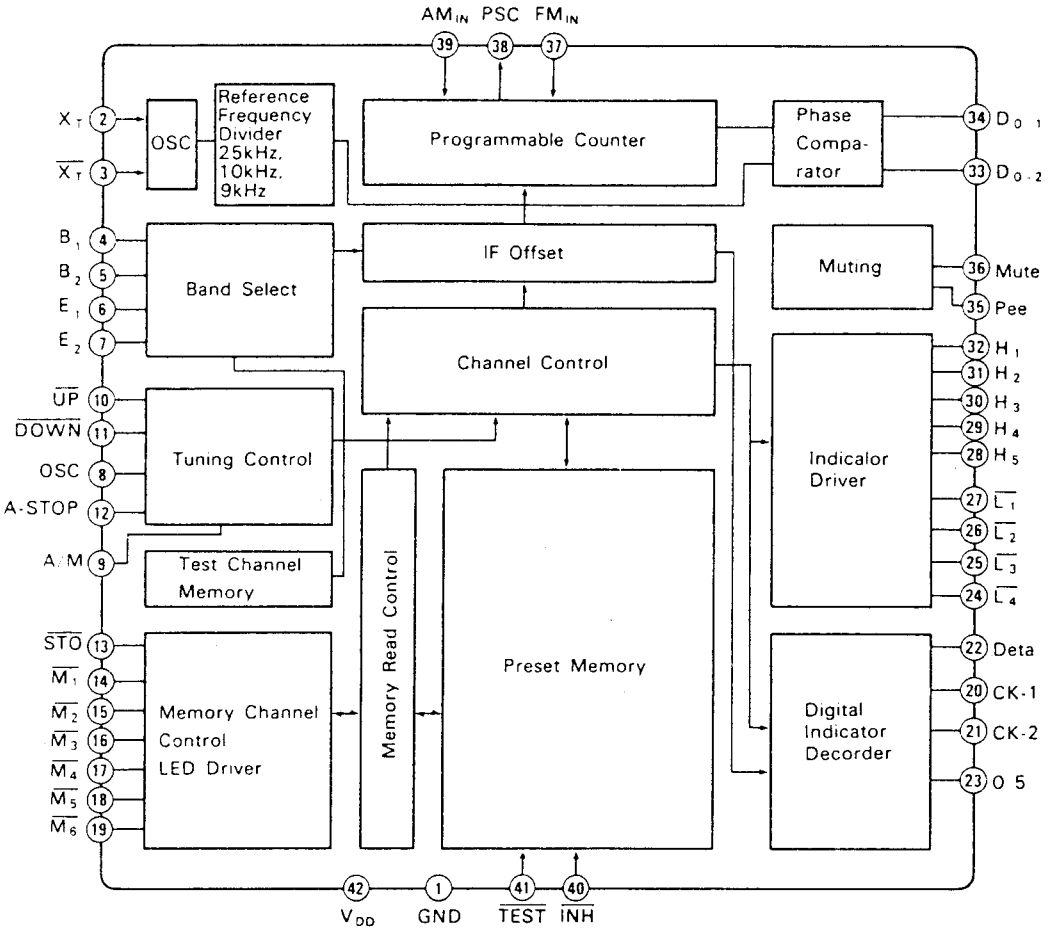
•HA12046 (Dolby IC)


OUTPUT2 Vcc DET2-2 DET2-1 HPF2 VCR2 INPUT2 OUT NR SW INPUT2
18 17 16 15 14 13 12 11 10
R-ch
L-ch
OSS
VCR
Input Amp
V/I CONV
HPA
SCA
INV Amp
1 OUTPUT1 2 DET1-2 3 DET1-1 4 HPF1 5 VCR1 6 INPUT1 OUT 7 REF 8 INPUT1 9 GND

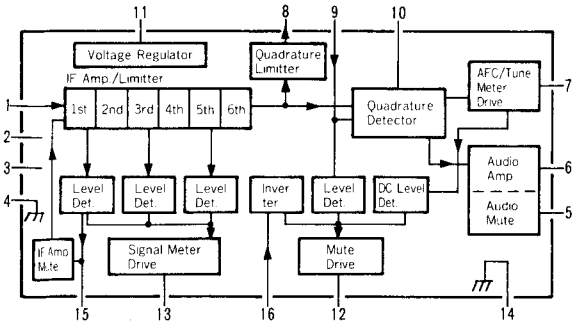
•TA7658P (Pre Amp. IC)



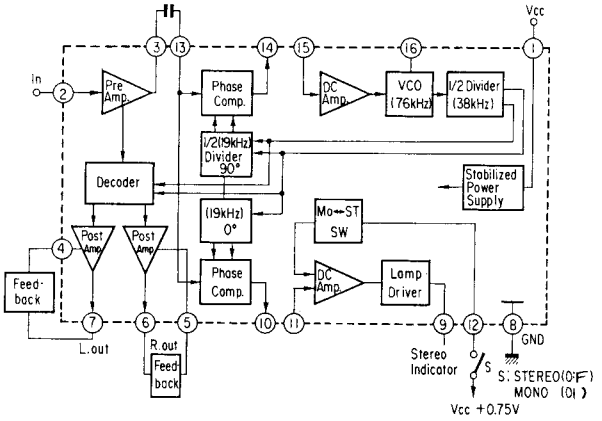
•TC9137P (PLL & Control IC)



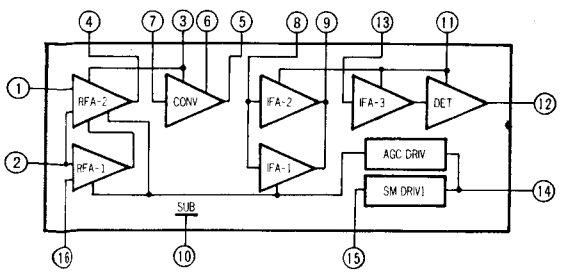
•LA1231N (IF & Quadrature Detector IC)



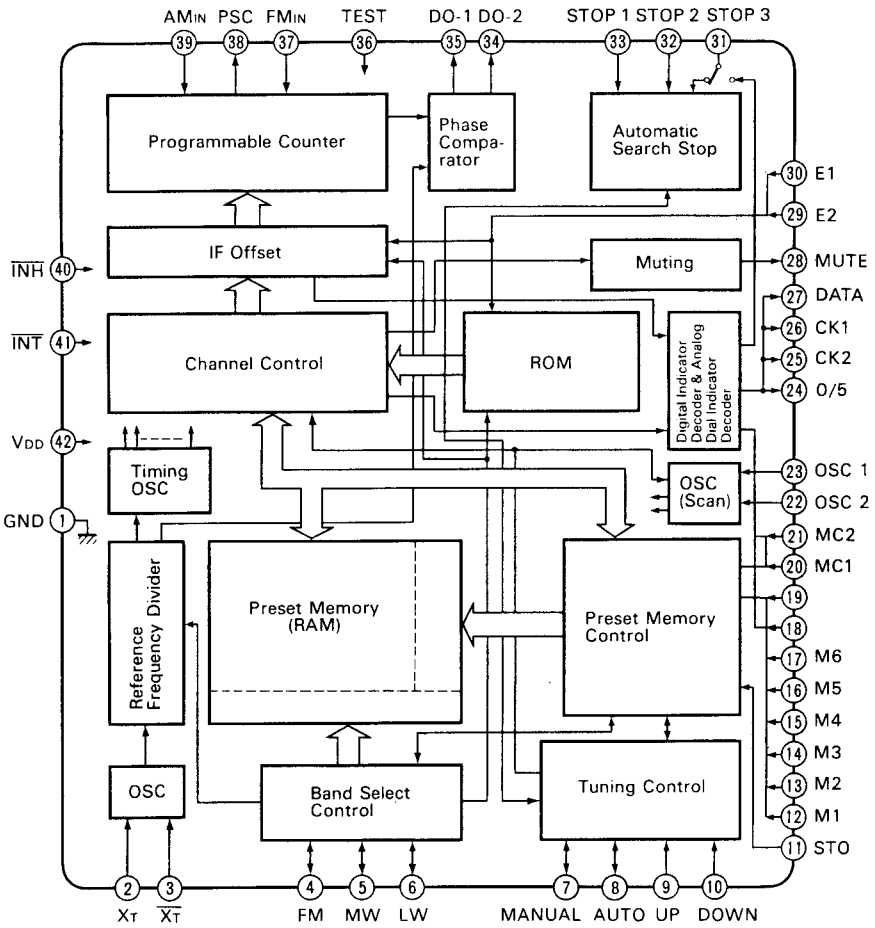
•HA1196 (MPX IC)



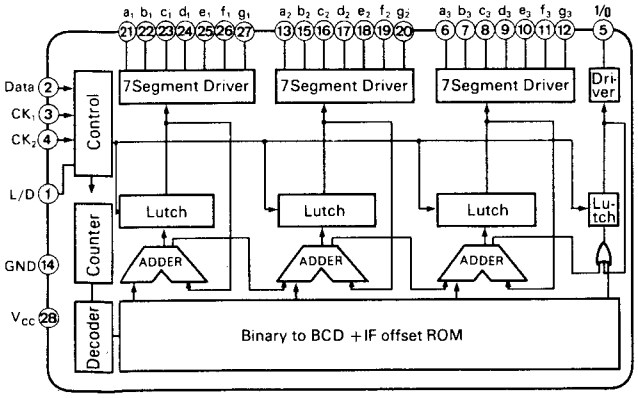
•HA1197 (AM Tuner IC)



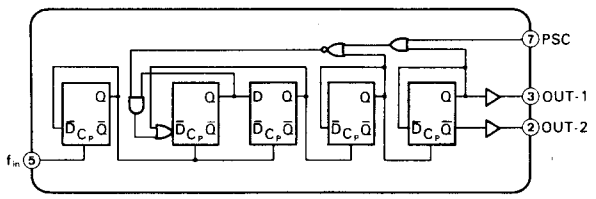
•TC9157P (PLL & Control IC)



•TD6301P (7 Segment Decorder IC)



•TD6104P (Prescaler IC)



4. ADJUSTMENTS

4-1. FM Adjustment (See Top View on Page 19)

Fig. 4-1

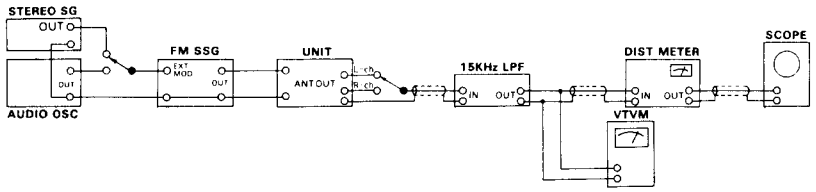
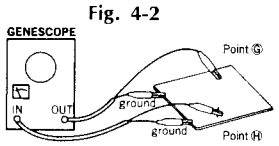
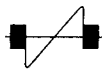


Fig. 4-2



1) FM IF & Reference Frequency Adjustment

Note: 1. SELECTOR ..... FM
2. FM MUTING/MODE ..... OFF/MONO

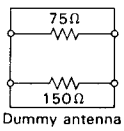
STEP	SUBJECT		FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Reference Frequency Adj. (fIC1→TC9157P)		No Input	—	Between Point Ⓐ (Pin 24 of fIC1) & Earth Freq. Counter	fTC1 (F-4342)	25 kHz	• Short between Point Ⓑ & Point Ⓒ (Pin 36 & 42 of fIC1) • See Parts Location F-4342 on page 16
	Reference Frequency Adj. (fIC1→TC9137P)		No Input	—	Between Point Ⓞ (Pin 35 of fIC1) & Earth Freq. Counter	fTC1 (F-4341)	25 kHz	• Short between Point Ⓟ, Ⓠ (Pin 6, 7 of fIC1) & Earth • See Parts Location F-4341 on page 16
2.	IF Coil Adj.		98MHz ANT Input 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG	ANT terminal 300Ω	Between Point Ⓓ (dVR1) & Earth DC Volt Meter	IFT Coil (Front-end, F-4343)	Max. DC Volt	• See Parts Location F-4343 on page 13
3.	Discriminator Coil Adj. In case of using Genescope	1	No Input	—	Between Point Ⓡ & Point Ⓢ (dR41) DC Volt Meter	dT2 (F-3767)	DC 0V ± 30mV	• Repeat procedures as stated in subject 1 & 2. • See Parts Location F-3767 on page 15
		2	Output 80dB, Genescope	Point Ⓖ (dR33)	Between Point Ⓗ (dD2) & Earth	dT3 (F-3767)	Steep linearity of S curve. Make symmetrical S curve.	
	Discriminator Coil Adj. In case of using Dist meter	1	No Input	—	Between Point Ⓡ & Point Ⓢ (dR41) DC Volt Meter	dT2 (F-3767)	DC 0V ± 30mV	• Repeat procedures as stated in subject 1 & 2. • See Parts Location F-3767 on page 15
		2	98MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG	ANT terminal 300Ω	• TAPE-2 REC L-CH or R-CH VTVM & SCOPE	dT3, (F-3767)	Min. THD	

• ADJUSTMENT FOR FM

There are two kind in indication of FM SSG output attenuator
1. Attenuator with marking of 75Ω open ..... open indication type.
2. Attenuator with marking of 75Ω load or close ..... load or close indication type.

FM SG output level in this FM adjustment are described as open indication type.
To feed FM signal, a dummy antenna circuit as Fig. 4-3 must be connected between FM SG output and ANT terminal (300Ω) of the unit.

Fig. 4-3



Dummy antenna

- The following table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltage (dB/μV) in each indication type.

	FM SG Attenuator Indication	Available Power Ratio	Antenna Terminal Voltage
Open indication type	0 dB 66 dB	−0.8 dBf 65.2 dBf	−6 dBμV 60 dBμV
Load or close indication type	0 dB 60 dB	5.2 dBf 65.2 dBf	0 dBμV 60 dBμV

2) FM STEREO Adjustment

1. FM MODE ..... AUTO

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	PLL VCO Adj.	98MHz ANT Input 65dBf (59.8dB), FM SSG, Pilot 19kHz (9% MOD.), R or L MODE 1kHz+Pilot (100% MOD.), STEREO SG	ANT terminal 300Ω	Stereo Indicator	dVR2 (F-3767)	Light indicator	• Adjust the dVR2 within center of light level • See Parts Location F-3767 on page 15
	PLL VCO Adj. In case of using Freq.	98MHz ANT Input 65dBf (59.8dB), FM SSG, No MOD.	Same as above	Between Point Ⓘ (dVR2) & Earth Freq. Counter	dVR2 (F-3767)	76kHz±50Hz	• See Parts Location F-3767 on page 15
2.	Muting level Adj.	98MHz ANT Input 22dBf (16.8dB), FM SSG, Pilot 19kHz (9% MOD.), L or R MODE 1kHz+Pilot (100% MOD.), STEREO SG.	Same as above	Stereo indicator TAPE-2 REC L-CH or R-CH, VTVM & SCOPE	dVR1 (F-4343)	Stereo indicator turns ON or Output Signal comes out	• See Parts Location F-4343 on page 13

4-2. AM Adjustment (See Top View on Page 19)

Fig. 4-4

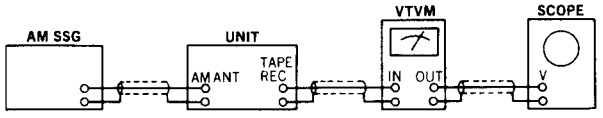
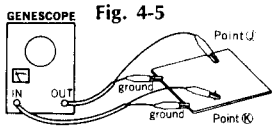
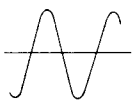


Fig. 4-5



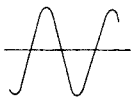
1) AM IF Adjustment & MW (AM) Tuning Adjustment

Note: 1. SELECTOR ..... AM (DA-T500)/MW (DA-T500L)
2. Connect AM loop antenna to AM antenna terminal.

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil Adj.	Genescope Output 60dB	Point Ⓘ (eC22) (F-3746)	Between Point Ⓚ (eR26) & Earth	eCF1, eL2 (F-3746)	Max, Waveform	• See Parts Location F-3746 on page 15
2.	522kHz (or 520kHz) Tuning Adj.	No Input	—	Between Point Ⓣ (eR2) & Earth DC Volt Meter	eT3 (F-4343)	1V±0.1V	• Repeat procedures as stated in subject 2 & 3. • See Parts Location F-4343 on page 13
3.	1602kHz (or 1610kHz) Tuning Adj.	No Input	—	Same as above	eTC2 (F-4343)	9V±0.1V	
4.	603kH (or 600kHz) RF Adj.	603kHz (or 600kHz) ANT Input 30dB 400Hz (30% MOD.), AM SSG	ANT terminal	TAPE-2 REC L-CH or R-CH VTVM & SCOPE	eT1 (F-4343)	Max. Output	• See Parts Location F-4343 on page 13 
5.	1404kHz (or 1400kHz) RF Adj.	1404kHz (or 1400kHz) ANT Input 30dB 400Hz (30% MOD.), AM SSG	Same as above	TAPE-2 REC L-CH or R-CH VTVM & SCOPE	eTC1 (F-4343)	Max. Output	

2) LW Tuning Adjustment (DA-T500L only) (See Parts Location F-4343 on page 19)

Note: SELECTOR ..... LW

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	153kHz Tuning Adj.	No Input	—	Between Point Ⓣ (eR2) & Earth DC Volt Meter	eT4 (F-4343)	1V±0.1V	• Repeat procedures as stated in subject 1 & 2.
2.	360kHz Tuning Adj.	No Input	—	Same as above	eTC4 (F-4343)	9V±0.1V	
3.	170kHz RF Adj.	170kHz ANT Input 30dB 400Hz (30% MOD.), AM SSG	ANT terminal	TAPE-2 REC L-CH or R-CH VTVM & SCOPE	eT2 (F-4343)	Max. Output	
4.	300kHz RF Adj.	300kHz ANT Input 30dB 400Hz (30% MOD.), AM SSG	Same as above	TAPE-2 REC L-CH or R-CH VTVM & SCOPE	eTC3 (F-4343)	Max. Output	

4-3. Cassette Deck Adjustment

1) Tape Speed Adjustment

Note: 1. Use Sansui Test Tape, SCT-S3K (3 kHz signals are recorded on the tape).
2. Connections are shown in Fig. 4-6.

Fig. 4-6

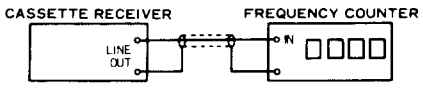
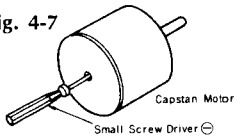


Fig. 4-7



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Tape Speed Adj.	TAPE-2 REC L-CH and R-CH Frequency counter	Playback the Test Tape SCT-S3K	Turn semi-variable resistor as Fig. 4-7.	3000Hz±1.5%	Use small screw driver.

2) Playback Adjustment

Note: 1. Before this adjustment, clean REC/P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10KN, SCT-L400N and SCT-F1K.
3. Set the DOLBY NR switch to be OFF.
4. Connections are shown in Fig. 4-8.
5. Remove the cassette lid. (Fig. 4-11)

Fig. 4-8

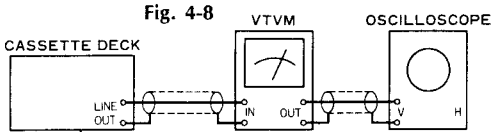
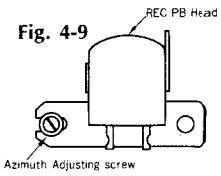


Fig. 4-9

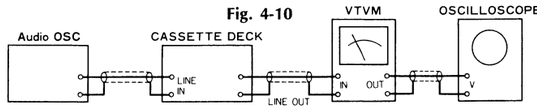


STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	TAPE-2 REC L-CH and R-CH VTVM, SCOPE	Playback the Test Tape-SCT-F10K	Adjust the azimuth adjusting screw in Fig. 4-9	MAX. Output on both channels.	Refer to removement of Lid Ass'y on Page 12. After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	Same as above	Set TAPE SELECTOR to NORMAL position. Playback the Test Tape SCT-L400	Adjust each xVR1 on L-CH and R-CH.	420mV±2dB	See Top View on page 19 & Parts Location F-4424 on page 13

2) REC Level & Frequency Response Adjustment

Note: 1. Connections are shown in Fig. 4-10.
2. Set the DOLBY NR switch to be OFF.
3. Use Sansui Test Tape, SCT-SA.
4. Set the TAPE-2/DA switch to be ON.

Fig. 4-10



STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz, 26.2mV from S.G. into TAPE-2 PLAY L-CH and R-CH	TAPE-2 REC L-CH and R-CH VTVM and SCOPE	Load the Test Tape SCT-SA and set TAPE SELECTOR to HIGH. 1. Depress PAUSE and REC button. 2. Push off the PAUSE button, then record the 1kHz signal. 3. Play back the 1kHz signal. 4. Confirm that the output levels on both channels are 30mV on VTVM.	1. If not 30mV, turn each vVR70 on L-CH and R-CH until output level 30mV on both channels are obtained.	See Top View on page 19 & Parts Location F-4345 on page 13.
2.	Frequency Response Adj.	Feed 1 kHz 26.2mV and 10kHz 26.2mV from S.G. into TAPE-2 PLAY L-CH and R-CH	Same as above	Load the Test Tape SCT-SA and set TAPE SELECTOR to HIGH. 1. Record the 1kHz and 10kHz signals from S.G. 2. Play back the 1kHz and 10kHz signals then confirm 10kHz signal level in less than 1kHz signal level ± 3dB on VTVM.	1. If not, adjust vVR71L for L-CH and vVR71R for R-CH slightly until the output levels the 10kHz signal level in less than 1kHz signal level ± 3dB on VTVM.	

◆ List of Sansui Test Tape

Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	–
SCT-F1K	1 kHz	High Frequency Equalization Check	–
SCT-F10K	10 kHz	REC/PB Head Adjustment	–
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment	–
SCT-S3K	3 kHz	Speed Check and Wow & Flutter Check	–
*SCT-AD NORMAL	–	Recording Bias Adjustment	TDK AD
*SCT-SA HIGH	–	REC/PB Level Adjustment	TDK SA
*SCT-MA (METAL)	–	Frequency Response Check	TDK MA

•**Note:** Some reference tapes marked * are not supplied.
As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

◆ TAPE SELECTOR Position

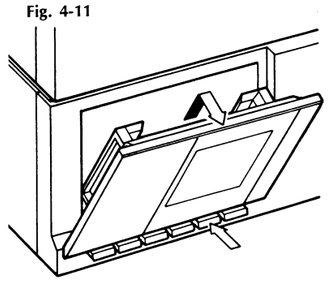
NORMAL	
FUJI	FL, FXI
MAXELL	UL, UD, XL I, XL I-S
TDK	D, AD, OD
SCOTCH	TARTAN CRYSTAL MASTER 120
SONY	AHF, BHF, CHF Low-Noise
AGFA	SUPER SUPER COLOR SUPER FERRO DYNAMIC
BASF	LN Super LH I

HIGH	
FUJI	FX II
MAXELL	XL II, XL II-S
TDK	SA, SA-X
SCOTCH	MASTER 70
SONY	JHF
AGFA	STEREO CHROM
BASF	SCR
METAL	
MAXELL	MX
TDK	MA-R, MA
SCOTCH	Metafine
SONY	METALLIC

◆ Removement and Attachment of Lid Ass'y

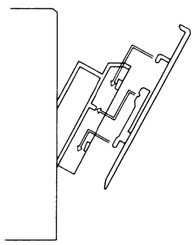
Depress the EJECT button to open the cassette well ass'y, and pull the Lid up and then toward you to remove it as shown in the figure.

Fig. 4-11



Re-attach the Lid to the cassette holder as shown in the figure.

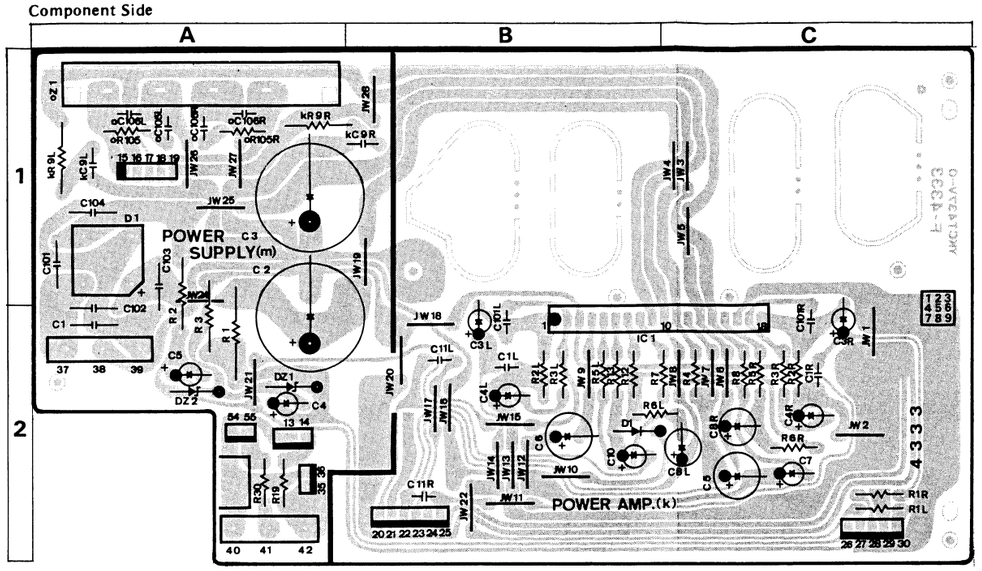
Fig. 4-12



5. PARTS LOCATION & PARTS LIST

5-1. F-4333 Power Amp. Circuit Board (Stock No. 00760701)

Component Side



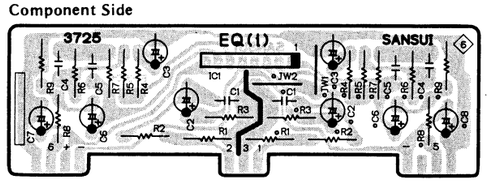
Parts List

Parts No.	Stock No.	Description
•IC		
⚠ kIC1	46563100	STK4141-2
•Diode		
kD1	03117600 or 46086000	1S2473T77 1S1588TP-3
⚠ kR6	00133100	2.2kΩ 1/2W N.I.R.
⚠ kR7	00131000	1kΩ 1/2W N.I.R.
⚠ kR8	00131000	1kΩ 1/2W N.I.R.
⚠ kR9	00142400	4.7Ω 1W N.I.R.
⚠ kR14	00133000	220Ω 1/2W N.I.R.
⚠ mD1	46728100	DBA30B
•Zener Diode		
mDZ1	46115400	05Z20-Y
mDZ2	46115400	05Z20-Y
⚠ mR1	00190200	470Ω 2W N.I.R.
⚠ mR2	00144100	820Ω 1W N.I.R.
⚠ mR19	00132900	22Ω 1/2W N.I.R.
mC1	08680400	0.01μF 500V C.C.
mC2	46363300	3900μF 42V E.C.
mC3	46363300	3900μF 42V E.C.
oZ1	46549200	Terminal Board 4P, SPEAKERS

5-2. F-3725 EQ. Amp. Circuit Board

(Stock No. 00695501)

Component Side

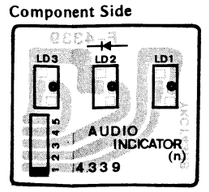


Parts List

Parts No.	Stock No.	Description
•IC		
iIC1	46078900	M5218L

5-3. F-4339 Phono, Tuner & Tape Indicator Circuit Board

Component Side

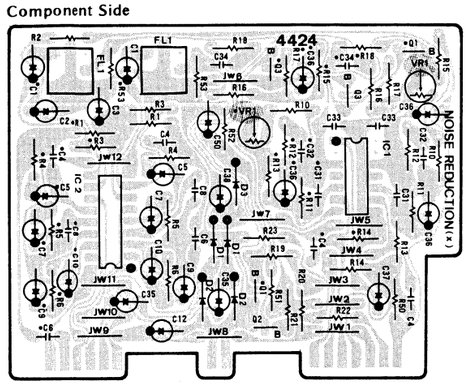


Parts List

Parts No.	Stock No.	Description
•LED		
nLD1	46176900 or 46470200	TLS-123 SEL2210S
nLD2	46176900 or 46470200	TLS-123 SEL2210S
nLD3	46176900 or 46470200	TLS-123 SEL2210S

5-4. F-4424 Play Amp. & Noise Reduction Circuit Board (Stock No. 00783301)

Component Side



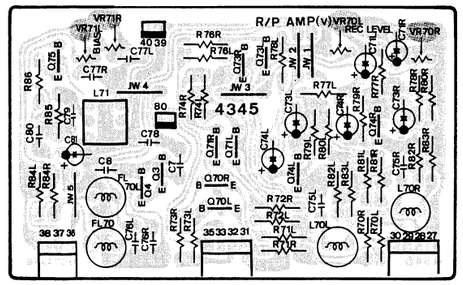
Parts List

Parts No.	Stock No.	Description
•Transistor		
xQ1	46367101	2SC2603
	or 46367301	2SC2458
xQ2	46367101	2SC2603
	or 46367301	2SC2458
xQ3	46719901	DTC124
•IC		
xIC1	46602000	HA12046
xIC2	46684400	TA7658P
•Diode		
xD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
xFL1	46859400	Dolby Filter 253AGG
xVR1	46633500	470Ω S.V.R., P.B Level Adj.
	or 46918200	500Ω S.V.R., P.B Level Adj.

5-5. F-4345 Rec Amp. Circuit Baord

(Stock No. 00773301)

Component Side

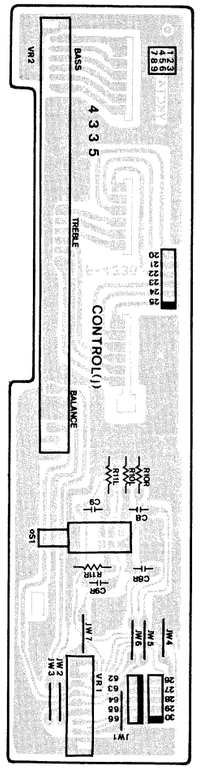


Parts List

Parts No.	Stock No.	Description
•Transistor		
vQ60	46581701	2SC1845
vQ61	46581701	2SC1845
vQ70	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
vQ71	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
vQ73	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
vQ74	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
vQ75	46725801	2SC1627A
vC60	46654000	220pF 100V F.C.
vC78	46657000	3900pF 100V F.C.
vFL70	42904400	Peaking Coil
	or 42904401	Trap Coil
vL70	46090500	Inductor 2.7mH
	or 46313900	Inductor 2.7mH
vL71	46362200	Bias OSC Coil
vVR70	46634700	47kΩ S.V.R., Rec Level Adj.
vVR71	46634900	100kΩ S.V.R., Bias Adj.

5-6. F-4335 Tone & Balance VR. Circuit Board

Component Side

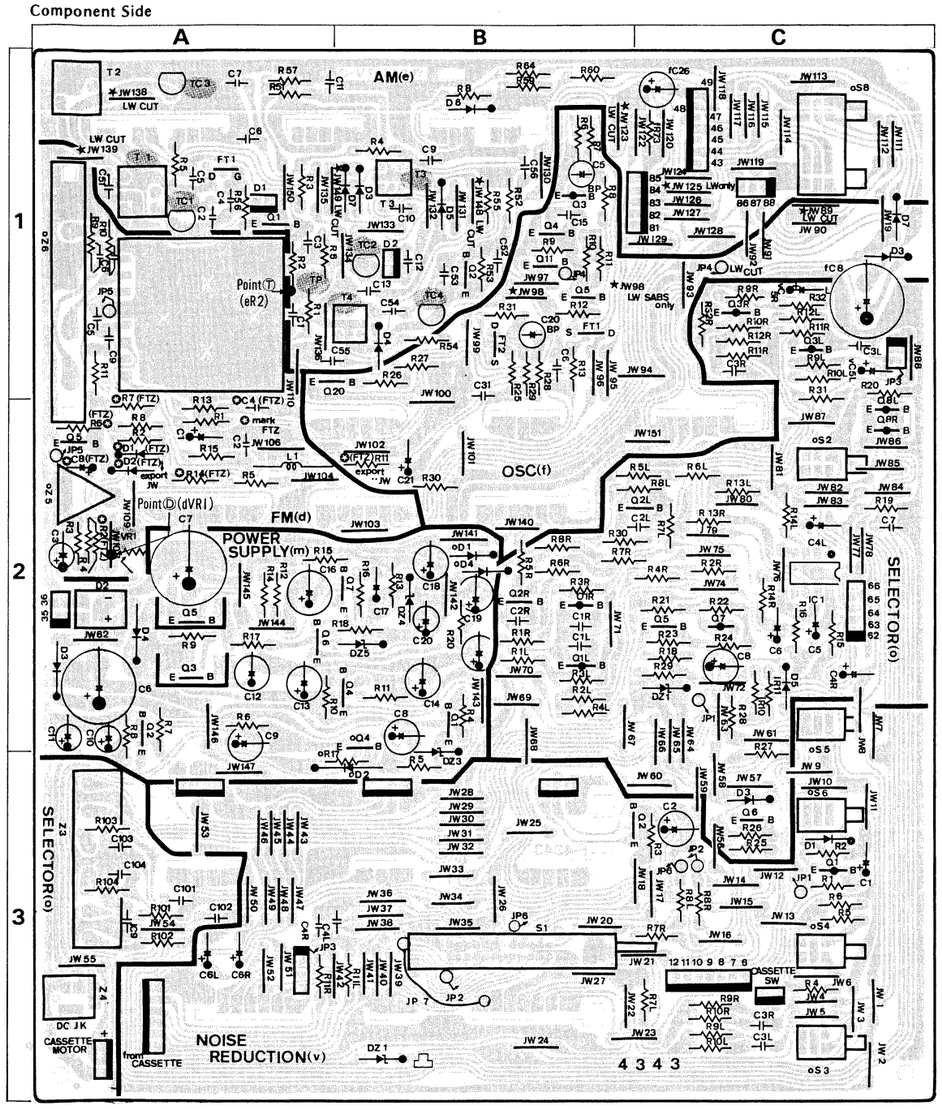


Parts List

Parts No.	Stock No.	Description
jVR1	46722300	150kΩ(B) V.R., VOLUME
jVR2	46363100	50kΩ(C)×2×2+250kΩ V.R., BASS, TREBLE, BALANCE
oS1	46670600	Push SW., LOUDNESS

5-7. F-4343 Main Circuit Baord (Stock No. 00761601 = DA-T500/Stock No. 00762805 = DA-T500L)

Component Side



Parts List

Parts No.	Stock No.	Description
	46562600	FM Frontend Pack
dQ5	46367101	2SC2603
	or 46367301	2SC2458
dL1	07250300	Peaking Coil 2.2μH
dVR1	46634300	10kΩ S.V.R., Muting Level Adj.
⚠ dR8	00118000	22Ω 1/4W F.R.
•FET		
eFT1	46393000	2SK192A-Y
	or 46393001	2SK192A-GR
eD1	46254600	Varactor Diode 1SV100
eD2	46254600	Varactor Diode 1SV100

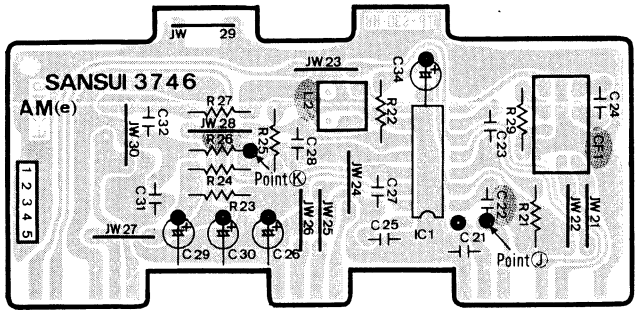
Parts No.	Stock No.	Description
•Diode		
eD6	03117600	1S2473T77
	or 46086000	1S1588TP-3
eTC1	46095700	Trimmer Capacitor 30pF
eTC2	46095700	Trimmer Capacitor 30pF
eT1	46394600	AM ANT Coil
eT3	46398200	AM RF Coil
⚠ eR64	00130900	100Ω 1/2W N.I.R.
•Transistor		
fQ3	46367001	2SA1115
	or 46367201	2SA1048

Parts No.	Stock No.	Description
fQ4	46367101	2SC2603
	or 46367301	2SC2458
fQ5	46367101	2SC2603
	or 46367301	2SC2458
•FET		
fFT1	46643501	2SK163-K2
	or 46643502	2SK163-L1
	or 46643601	2SK117-Y
	or 46643602	2SK117-GR
•Diode		
fD3	03117600	1S2473T77
	or 46086000	1S1588TP-3
fD7	03117600	1S2473T77
	or 46086000	1S1588TP-3
fC5	07129900	1μF 50V E.B.
fC8	46725600	3900μF 6.3V E.C.
⚠ fR73	00130900	100Ω 1/2W N.I.R.
•Transistor		
⚠ mQ1	03083901	2SD313AL
⚠ mQ2	03083901	2SD313AL
⚠ mQ3	03083901	2SD313AL
⚠ mQ4	46367101	2SC2603
⚠ mQ5	03083901	2SD313AL
⚠ mQ6	46367101	2SC2603
⚠ mQ7	46367101	2SC2603
•Diode		
⚠ mD2	46273600	DBB10-B
⚠ mD3	03117700	10E-2
⚠ mD4	03117700	10E-2
•Zener Diode		
mDZ3	46114800	05Z16-Y
mDZ4	03177400	RD6.2E-B
	or 46111700	05Z6.2-X
	or 46111800	05Z6.2-Y
	or 46111900	05Z6.2-Z
mDZ5	03177400	RD6.2E-B
	or 46111700	05Z6.2-X
	or 46111800	05Z6.2-Y
	or 46111900	05Z6.2-Z
⚠ mR12	00132100	1.5kΩ 1/2W N.I.R.
⚠ mR17	00134200	330Ω 1/2W N.I.R.
•Transistor		
oQ1	46614001	2SA1283
oQ2	46540801	2SC2878
	or 46604301	2SC3327
oQ3	46614001	2SA1283
oQ4	46367001	2SA1115
	or 46367201	2SA1048
oQ5	46367101	2SC2603
	or 46367301	2SC2458
oQ6	46367101	2SC2603
	or 46367301	2SC2458
oQ7	46367001	2SA1115
	or 46367201	2SA1048
•IC		
oIC1	03607700	NJM4558D
	or 46580100	M5218P
•Diode		
oD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD2	03117700	10E-2
oD3	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD4	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD5	03117600	1S2473T77
	or 46086000	1S1588TP-3
•Zener Diode		
oDZ1	46113300	05Z10-Y
	or 46113200	05Z10-X
	or 46113400	05Z10-Z
	or 03178400	RD10E-B

Parts No.	Stock No.	Description
oS2	46603000	Push SW., TAPE-2/DA
oS3	46603000	Push SW., TAPE SELECTOR
oS4	46603000	Push SW., TAPE SELECTOR
oS5	46603000	Push SW., DOLBY NR
oS6	46727700	Push SW., REC MUTE
⚠ oR15	00132100	1.5kΩ 1/2W N.I.R.
⚠ oR16	00132100	1.5kΩ 1/2W N.I.R.
oZ2	46547300	Terminal Board 4P, ANTENNA
oZ3	46363900	Pin Terminal 6P, PHONO, TAPE-2
oZ4	46721900	Jack, DC 15 VOLT OUT
•Transistor		
vQ1	46367001	2SA1115
	or 46367201	2SA1048
vQ2	46367101	2SC2603
	or 46367301	2SC2458
•Diode		
vD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
•Zener Diode		
vDZ1	46111500	05Z5.6-Y
⚠ vR4	00133000	220Ω 1/2W N.I.R.
⚠ vR5	00131500	120Ω 1/2W N.I.R.
⚠ vR6	00130800	10Ω 1/2W N.I.R.
vS1	46722000	Lever SW., REC/PLAY
<DA-T500>		
•Transistor		
fQ11	46719901	DTC124
•Diode		
fD10	03117600	1S2473T77
	or 46086000	1S1588TP-3
•Transistor		
oQ8	46367001	2SA1115
	or 46367201	2SA1048
oS8	46725500	Push SW., SELECTOR FM/AM
<DA-T500L>		
•Transistor		
eQ1	46540801	2SC2878
	or 46604301	2SC3327
eQ2	46540801	2SC2878
	or 46604301	2SC3327
•Diode		
eD3	03117600	1S2473T77
	or 46086000	1S1588TP-3
eD4	03117600	1S2473T77
	or 46086000	1S1588TP-3
eD5	03117600	1S2473T77
	or 46086000	1S1588TP-3
eD6	03117600	1S2473T77
	or 46086000	1S1588TP-3
eD7	03117600	1S2473T77
	or 46086000	1S1588TP-3
eTC3	46095600	Trimmer Capacitor 20pF
eTC4	46095600	Trimmer Capacitor 20pF
eT2	46397900	LW RF Coil
eT4	46398000	LW OSC Coil
•Transistor		
fQ20	46367101	2SC2603
	or 46367301	2SC2458
fC20	08451900	3.3μF 50V E.B.
oS8	46725400	Push SW., SELECTOR FM/MW/LW
oJ1	24306200	Jack, PHONES
	46549200	Terminal Band 4P, SPEAKERS

5-8. F-3746 AM RF Circuit Board (Stock No. 00708101)

Component Side

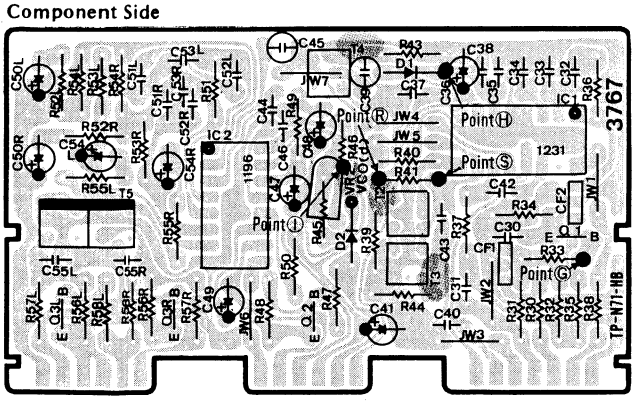


Parts List

Parts No.	Stock No.	Description
•IC		
eIC1	03603900	HA1197
eCF1	07254000	Ceramic Filter SFL450G3
eL2	46369600	AM IF COIL

5-9. F-3767 FM IF Circuit Board (Stock No. 00744601)

Component Side

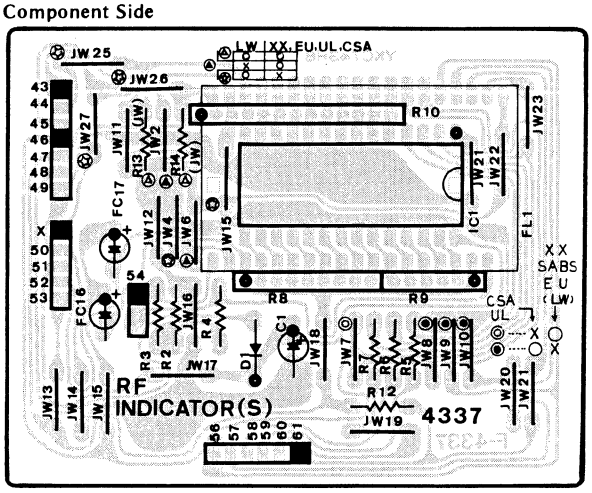


Parts List

Parts No.	Stock No.	Description
•Transistor		
dQ1	46393201	2SC2786
dQ2	46391901	2SC2785
dQ3	46391901	2SC2785
•IC		
dIC1	07191200	LA1231N
dIC2	03603200	HA1196
•Diode		
dD1	03117600	1S2473T77
dD2	03117600	1S2473T77
dC39	08450900	4.7μF 16V E.B.
dC45	08451200	2.2μF 25V E.B.
dCF1	46202500	Ceramic Filter SFE10.7MS2 (RED)
dCF2	46202500	Ceramic Filter SFE10.7MS2 (RED)
dT5	46151300	Low Pass Filter (38kHz)
	or 46151301	Low pass Filter BL-67QA
dT2	46369100	FM IF COIL
dT3	46369200	MF IF COIL
dVR2	07241300	10kΩ(B) S.V.R., V.C.O

5-10. F-4337 FL. Display Circuit Board (Stock No. 00761101 = DA-T500/Stock No.00762605 = DA-T500L)

Component Side

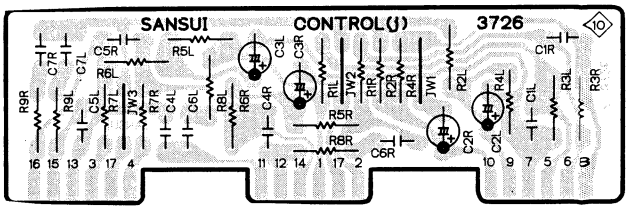


Parts List

Parts No.	Stock No.	Description
•IC		
sIC1	46410100	TD6301AP
•Diode		
sD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
sFL1	46335600	FL. Display Tube FG78F2
sR8	46349300	10kΩ×8 1/8W A.R.
sR9	46722100	10kΩ×5 1/8W A.R.
sR10	46722200	10kΩ×12 1/8W A.R.

5-11. F-3726 Tone Control Circuit Baord

Component Side

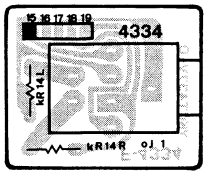


Parts List

Parts No.	Stock No.	Description
jC2	46561700	0.22μF 50V E.B.

5-12. F-4334 Phones Circuit Board

Component Side

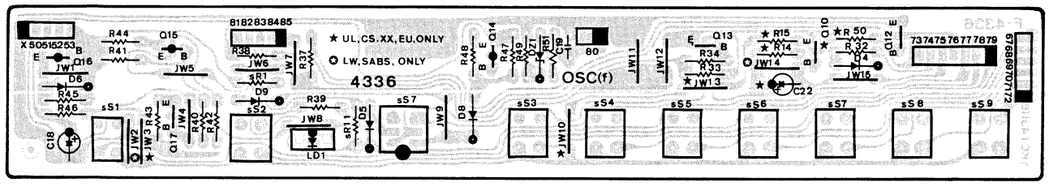


Parts List

Parts No.	Stock No.	Description
oJ1	24306200	Jack, PHONES

5-13. F-4336 Up, Down SW. & Muting Circuit Baord (Stock No. 00761001)

Component Side



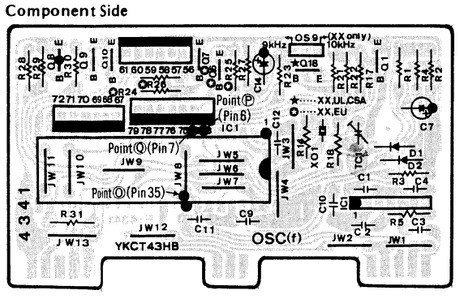
Parts List

Parts No.	Stock No.	Description
•Transistor		
fQ12	46367101	2SC2603
	or 46367301	2SC2458
fQ13	46367101	2SC2603
	or 46367301	2SC2458
fQ14	46367001	2SA1115
	or 46392001	2SA1175
fQ15	46367001	2SA1115
	or 46367201	2SA1048
fQ16	46367001	2SA1115
	or 46367201	2SA1048
fQ17	46367101	2SC2603
	or 46367301	2SC2458
•Diode		
fD4	03117600	1S2473T77
	or 46086000	1S1588TP-3
fD5	03117600	1S2473T77
	or 46086000	1S1588TP-3
fD6	03117600	1S2473T77
	or 46086000	1S1588TP-3
oS7	46563500	Push SW., FM MUTING/MODE

Parts No.	Stock No.	Description
•LED		
sLD1	46176900	TLS-123
	or 46470200	SEL2210S
sS1	46549500	Push SW., DOWN
sS2	46549500	Push SW., UP
sS3	46549500	Push SW., MEMORY
sS4	46549500	Push SW., PRESET STATION 1
sS5	46549500	Push SW., PRESET STATION 2
sS6	46549500	Push SW., PRESET STATION 3
sS7	46549500	Push SW., PRESET STATION 4
sS8	46549500	Push SW., PRESET STATION 5
sS9	46549500	Push SW., PRESET STATION 6
<DA-T500L Only>		
•Transistor		
fQ10	46367301	2SC2458
	or 46367101	2SC2603
•Diode		
fD8	03117600	1S2473T77
	or 46086000	1S1588TP-3
fD9	03117600	1S2473T77
	or 46086000	1S1588TP-3

5-14. F-4341 PLL Synthesizer & Control Circuit Board (Stock No. 00761501 = DA-T500)

Component Side

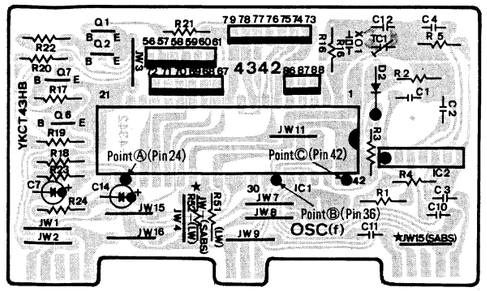


Parts List

Parts No.	Stock No.	Description
•Transistor		
fQ1	46367101	2SC2603
	or 46367301	2SC2458
fQ6	46367101	2SC2603
	or 46367301	2SC2458
fQ7	46367101	2SC2603
	or 46367301	2SC2458
fQ8	46367001	2SA1115
	or 46367201	2SA1048
fQ9	46719901	DTC124
fQ10	46367101	2SC2603
	or 46367301	2SC2458
fQ18	46367101	2SC2603
	or 46367301	2SC2458
•IC		
fIC1	46721810	TC9137AP
fIC2	07225000	TD6104P
fXO1	07237701	Quartz Element
•Diode		
fD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
fD2	03117600	1S2473T77
	or 46086000	1S1588TP-3
fD11	03111600	1S2473
fTC1	46095800	Trimmer Capacitor 45pF
	or 46163000	Trimmer Capacitor 50pF
oS9	46394000	Slide SW., 9kHz/10kHz Selector (XX)

5-15. F-4342 PLL Synthesizer & Control Circuit Baord (Stock NO. 00762705 = DA-T500L)

Component Side

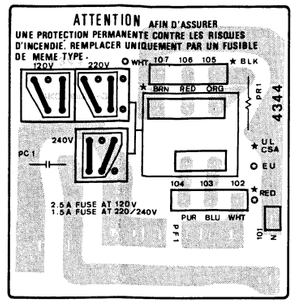


Parts List

Parts No.	Stock No.	Description
•Transistor		
fQ1	46367101	2SC2603
	or 46367301	2SC2458
fQ2	46834300	DTC144
fQ6	46367101	2SC2603
	or 46367301	2SC2458
fQ7	46367101	2SC2603
	or 46367301	2SC2458
•IC		
fIC1	46397400	TC9157P
fIC2	07225000	TD6104P
fX01	07237700	Quartz Element
•Diode		
fD2	03117600	1S2473T77
	or 46086000	1S1588TP-3
fD11	03111600	1S2473
fTC1	46095800	Trimmer Capacitor 45pF
	or 46163000	Trimmer Capacitor 50pF

5-16. F-4344 Power SW. Circuit Board

Component Side

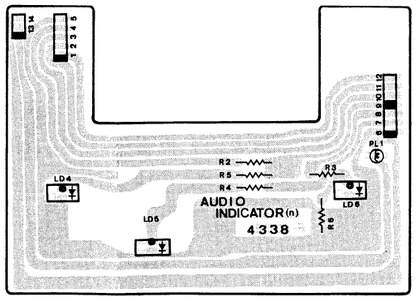

ATTENTION AFIN D'ASSURER
UNE PROTECTION PERMANENTE CONTRE LES RISQUES
D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE
DE MEME TYPE
4344
2.5 A FUSE AT 120 V
1.5 A FUSE AT 220/240 V

Parts List

Parts No.	Stock No.	Description
⚠ pC1	46425800	0.01μF 400V C.C.
⚠ pS1	46364300	Push Switch, POWER
<DA-T500>		
⚠ pF1	07188500	Fuse 1.5A 250V (XX)
⚠	or 07188700	Fuse 2.5A 250V (XX)
⚠	07188700	Fuse 2.5A 250V (UL, CSA)
⚠	07184800	Fuse 1.25A 250V (EU, AS)
⚠	07188500	Fuse 1.5A 250V (SA)
<DA-T500L>		
⚠ pF1	07184800	Fuse 1.25A 250V (EU, BS)

5-17. F-4338 Play, Rec & Dolby Indicator Circuit Board

Component Side



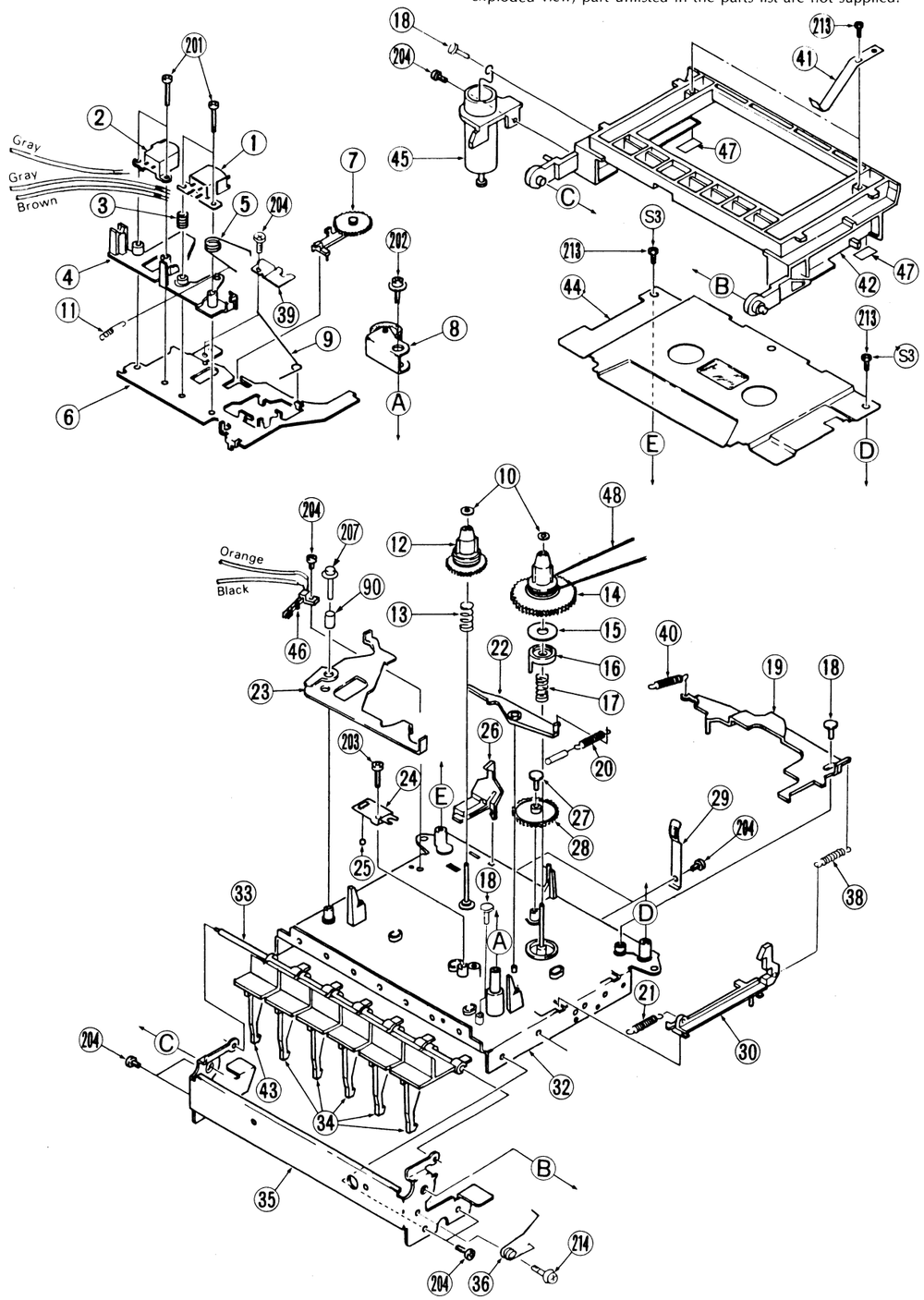
Parts List

Parts No.	Stock No.	Description
•LED		
nLD4	07250900	TLG-123A
	or 46470300	SEL2410E
nLD5	46176900	TLS-123
	or 46470200	SEL2210S
nLD6	46176900	TLS-123
	or 46470200	SEL2210S
nPL1	46315900	Pilot Lamp 12V 0.15A

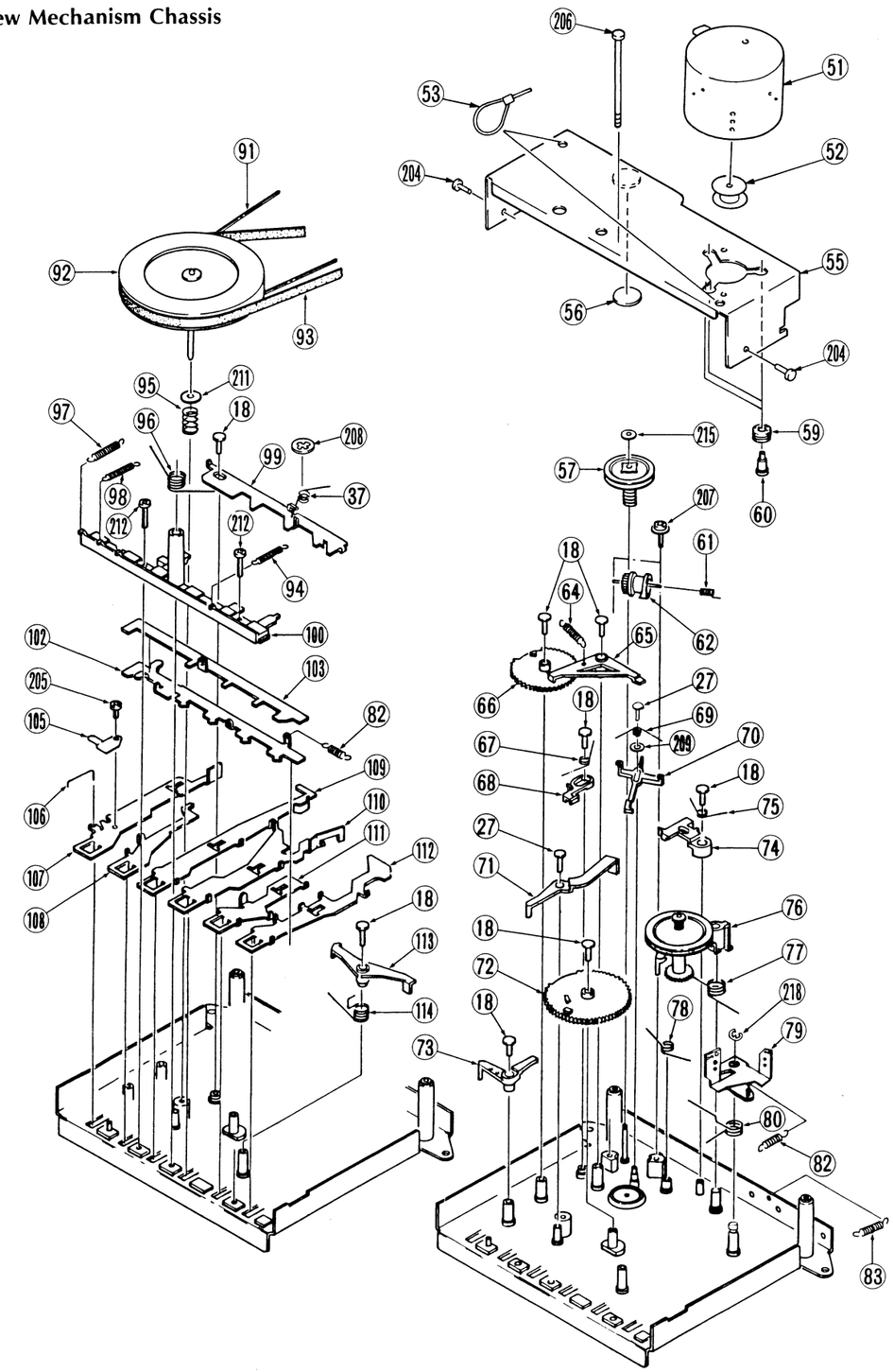
6. EXPLODED VIEW OF MECHANISM Ass'y & PARTS LIST

6-1. Front View of Mechanism Chassis

- Though every part included in mechanism ass'y is numbered in exploded view, part unlisted in the parts list are not supplied.



6-2. Rear View Mechanism Chassis



Parts List <Mechanism Ass'y (5-1/5-2)>

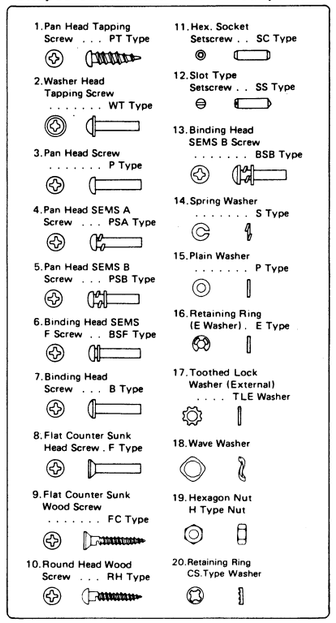
Parts No.	Stock No.	Description
1	07997300	REC/P.B. Head
2	07997400	Erase Head
3	09409700	C. Spring
4	37007000	Head Stand
5	37007100	Spring, Pinch Roller
7	07997700	Idler Ass'y B
8	37007200	Pinch Roller Arm Ass'y
9	07997900	Sping, Idler
10	09417300	Washer
11	37007300	T. Spring
12	09410100	Supply Reel Hub
13	47076300	S Brake Spring
14	07998100	Take Up Reel Hub Ass'y
15	09410400	Friction Plate
16	07998200	Clutch Plate
17	09425100	C. Spring
18	07998300	Rivet
19	37007400	Brake Arm
20	07998500	T. Spring
21	09409500	T. Spring
22	37007500	Pause Arm
23	47076400	Cam Lever Ass'y
24	37007600	Holder Plate
25	65400300	Steel Ball
26	37007700	REC Sensor Lever
27	07999000	Rivet
28	07999100	Idler Gear
29	37007800	Cassette Holder
30	37007900	Latch Lever
34	07999600	Button Lever (Black Model)
	07999700	Button Lever (Silver Model)
36	37008100	Spring
37	47000000	Spring
38	47076500	T. Spring
39	47000000	Spring
40	37008200	T. Spring
41	09416100	Keep Plate
42	47000100	Cassette Case
43	07999800	Button Lever
44	37008300	Mechanism Cover
45	47000300	Cylinder Ass'y
46	47000400	Leaf Switch
47	47000500	Leaf Switch
48	07976700	Belt, Counter
51	37008500	Motor
52	47000600	Pulley
57	47000900	Worm Gear
59	47001100	Rubber Cushion
60	47001200	SD Screw
61	09410800	C. Spring
62	47001300	AS Cam
64	47001400	REW Spring
65	47001500	Start Lever D
66	47001600	Assist Gear B
67	47001700	Spring
68	47001800	Eject Sub Plate
69	47001900	Spring
70	47002000	Sensor
71	47002100	Stop Arm
72	47076900	Assist Gear A
73	47002300	Start Lever C
74	47002400	Sensor Arm
75	47002500	Spring
76	37008600	Tension Ass'y
77	47002700	Spring
78	47002800	Spring

Parts List

Parts No.	Stock No.	Description
80	47002900	Spring
82	07999400	T. Spring
83	47003200	T. Spring
91	37008700	Belt, Tension
92	37008800	Flywheel
93	37008900	Belt, Capstan
94	47004000	T. Spring
95	47003700	C. Spring
96	47003800	Spring
97	47003900	T. Spring
98	47001000	T. Spring
100	37009000	Lever Holder
105	47004200	Pause Plate Spring
106	47004300	Lock Pin
113	47004400	Start Lever A
114	47004500	Spring
201	09416700	B-Type Screw, M2×11
202	47004600	FT-Type Screw, M2.6×8
203	09416400	PD-Type Screw, M2.6×10
204	07710600	PD-Type Screw, M2.6×5
205	07710600	PD-Type Screw, M2.6×5
206	47004700	PD-Type Screw, M2.6×30
207	09416500	WT-Type Screw, M2.6×6
208	51829700	CS-Type Washer D8
209	51825000	T-Type Washer, FT3.0×0.25
211	47004800	P-Type Washer,
212	00440500	PT-Type Screw, M2.6×8
213	09418300	BT-Type Screw, M2×5
214	47031500	Screw
215	47004900	T-Type Washer
218	00489300	E-Type Washer D4

* •FT-Type: Flange Head Tapping
•PD-Type: Pan Head Deltite

•Shapes of standard mechanical parts

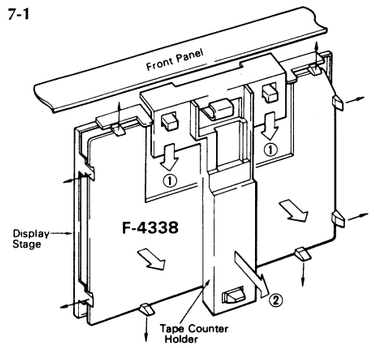

1. Pan Head Tapping Screw . . . PT Type
2. Washer Head Tapping Screw . . . . . WT Type
3. Pan Head Screw . . . . . P Type
4. Pan Head SEMS A Screw . . . PSA Type
5. Pan Head SEMS B Screw . . . PSB Type
6. Binding Head SEMS F Screw . . BSF Type
7. Binding Head Screw . . . B Type
8. Flat Counter Sunk Head Screw . F Type
9. Flat Counter Sunk Wood Screw . . . . . FC Type
10. Round Head Wood Screw . . . RH Type
11. Hex. Socket Setscrew . . SC Type
12. Slot Type Setscrew . . SS Type
13. Binding Head SEMS B Screw . . . . . BSB Type
14. Spring Washer . . . . . S Type
15. Plain Washer . . . . . P Type
16. Retaining Ring (E Washer) . E Type
17. Toothed Lock Washer (External) . . . . TLE Washer
18. Wave Washer
19. Hexagon Nut H Type Nut
20. Retaining Ring CS Type Washer

7. MAIN PARTS REPLACEMENT

A. Replacement of Display Stage

1) Remove bonnet.
2) Remove tape counter belt and relay pulley. (See 8-2. Top View on page 19)
3) Remove tape counter holder from front panel. (See Fig. 7-1)
4) Remove circuit board F-4338 from display holder. (See Fig. 7-1)
5) Remove display holder from front panel.

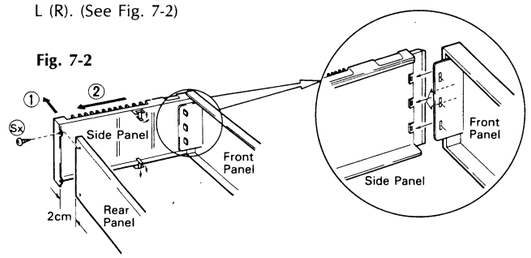
Fig. 7-1



B. Replacement of Side Panel L (R)

1) Remove bonnet and bottom plate.
2) Remove the screw (Sx) fixing side panel L (R) from rear panel side.
3) Shift the position of the side panel L (R) 2 cm in the arrow direction ① and then pull it the arrow direction ② to remove the side panel L (R). (See Fig. 7-2)

Fig. 7-2



C. Replacement of Front Panel Ass'y

1) Remove bonnet and bottom plate.
2) Remove side panel L and R. (See Replacement B)
3) Remove tension wire. (See 8-2. Top View on page 19)
4) Remove counter belt and relay pulley (See 8-2. Top Viedw on page 19) from front panel.
5) Remove mechanism assembly. (See Replacement D.)
6) Remove tape counter holder from front panel. (See Fig. 7-1)
7) Remove circuit board F-4338 from display stage. (See Fig. 7-1)
8) Remove circuit board from front panel.
9) Remove display stage from front panel. (See Replacement A.)

D. Replacement of mechanism assembly

(See 6. Exploded View of Mechanism Ass'y on page 17)

1) Remove bonnet, bottom plate, and cassette lid ass'y.
2) Disconnect REC spring (See 8-2 Top View on page 19) from change plate (79) of mechanism ass'y.
3) Remove counter belt (46) from relay pulley (See 8-2. Top View on page 19).
4) Remove four screws fixing mechanism assembly.

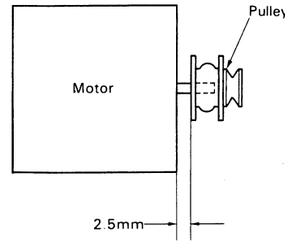
E. Replacement of Motor (51)

(See 6. Exploded View of Mechanism Ass'y on page 17)

1) Remove bonnet and bottom plate.
2) Disconnect REC spring (See 8-2. Top View on page 19) from change plate (79) of mechanism assembly.
3) Cut wires from motor.
4) Cut wires band (50).
5) Loosen three screws (51) and (52) fixing mechanism holder (55).
6) Remove three screws (60) fixing motor ass'y.
7) Pluck out pulley (52) from motor.

Note: When installing the pulley to the motor, adjust the gap between the motor and the pulley so as to be about 2.5 mm. (See Fig. 7-3)

Fig. 7-3



F. Replacement of Tension Belt (91) and Capstan Belt (93)

(See 6. Exploded View of Mechanism Ass'y on page 17)

1) Perform items 1)~5) "E. Replacement of Motor" first.
2) Take out tension belt and capstan belt.

G. Replacement of Counter Belt (46)

(See 6. Exploded View of Mechanism Ass'y on page 17)

1) Remove cassette lid ass'y.
2) Remove two screws (53) to take out mechanism cover (44).
3) Take out counter belt from relay pulley (See 8-2. Top View on page 19) and take up reel hub (14).

H. Raplacement of Supply Reel Hub (12) and Take Up Reel Hub (14) (See 6. Exploded View of Mechanism Ass'y on page 17)

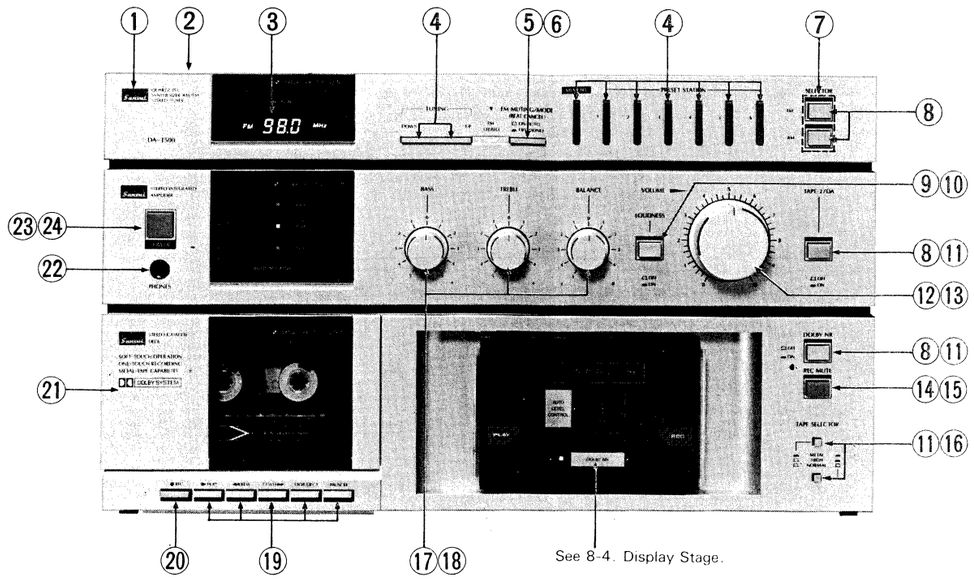
1) Remove cassette lid ass'y.
2) Remove two screws (13) to take out mechanism cover (44).
3) Take out ply-washer (10) to remove supply reel hub or take up reel hub.

I. Replacement of Control Button (34) or REC Button (49)

1) Remove mechanism assembly.
2) Take out the button (34) or (49) from button shaft (33).

8. OTHER PARTS

8-1. Front View



See 8-4. Display Stage.

Parts List <Front View>

Parts No.	Stock No.	Description
<Common Parts>		
2	07952400	Bonnet
3	46335600	FL. Display Tube
4	46549500	Push SW., DOWN, UP, PRESET STATION
6	46563500	Push SW., FM MUTING/MODE
9	47393100	Knob, LOUDNESS
10	46670600	Push SW., LOUDNESS
11	46603000	Push SW., TAPE-2/DA, DOLBY NR, TAPE SELECTOR
13	46722300	150kΩ(B)×2 VR, VOLUME
14	47290900	Knob, REC MUTE
15	46727700	Push SW., REC MUTE
18	46363100	50kΩ(C)×2, 250kΩ VR., BASS, TREBLE, BALANCE
20	07999800	Button Lever, REC
22	24306200	Jack, PHONES
23	47393300	Knob, POWER
⚠ 24	46364300	Push SW., POWER
<Silver Model>		
1	47310400	Front Panel <DA-T500>
	47310500	Front Panel <DA-T500L>
5	47291000	Knob, FM MUTING/MODE
8	47290700	Knob, SELECTOR, TAPE-2/DA, DOLBY NR
12	47296300	Knob, VOLUME
16	47392800	Knob, TAPE SELECTOR
17	47296500	Knob, BASS, TREBLE, BALANCE
19	07999600	Butter Lever
21	47304500	Cassette Lid Ass'y
<Black Model>		
1	47310600	Front Panel <DA-T500>
	47310700	Front Panel <DA-T500L>
5	47291100	Knob, FM MUTING/MODE
8	47290800	Knob, SELECTOR, TAPE-2/DA, DOLBY NR
12	47296400	Knob, VOLUME
16	07917300	Knob, TAPE SELECTOR
17	47296600	Knob, BASS, TREBLE, BALANCE
19	07999700	Butter Lever
21	47304600	Cassette Lid Ass'y

Parts List <Front View>

Parts No.	Stock No.	Description
<DA-T500 Only>		
7	46725500	Push SW., SELECTOR FM/AM
<DA-T500L Only>		
7	46725400	Push SW , SELECTOR FM/MW/LW

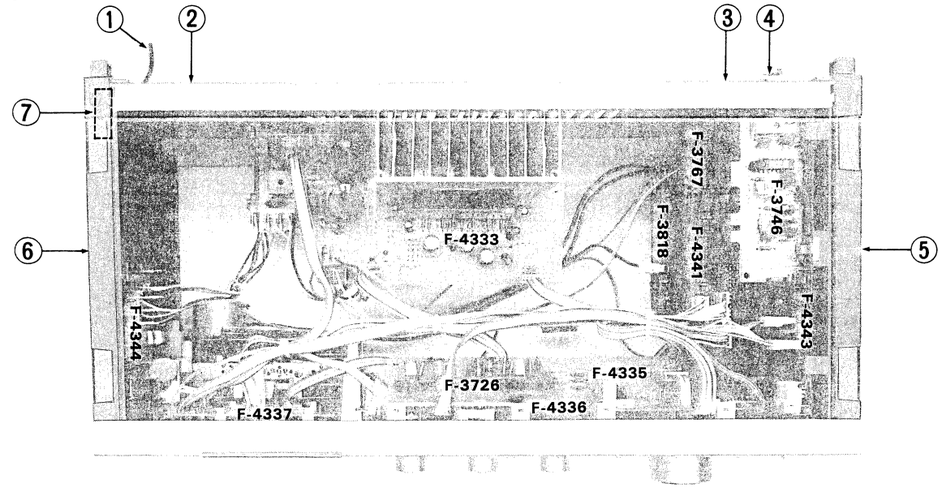
Parts List <Top View>

Parts No.	Stock No.	Description
⚠ 1	38004700	Power Supply Cord (XX, UL, SA)
⚠	46321000	Power Supply Cord (CSA)
⚠	38004500	Power Supply Cord (EU)
⚠	07204200	Power Supply Cord (AS)
⚠ 2	07204700	Slide SW., Voltage Selector (DA-T500=EU, AS/DA-T500L=EU, BS)
3	46732000	Ground Terminal
4	46547300	Terminal Board 4P, ANTENNA
5	47277200	Side Panel Ass'y (R)
6	47277100	Side Panel Ass'y (L)
7	47390300	AC Cord Cover

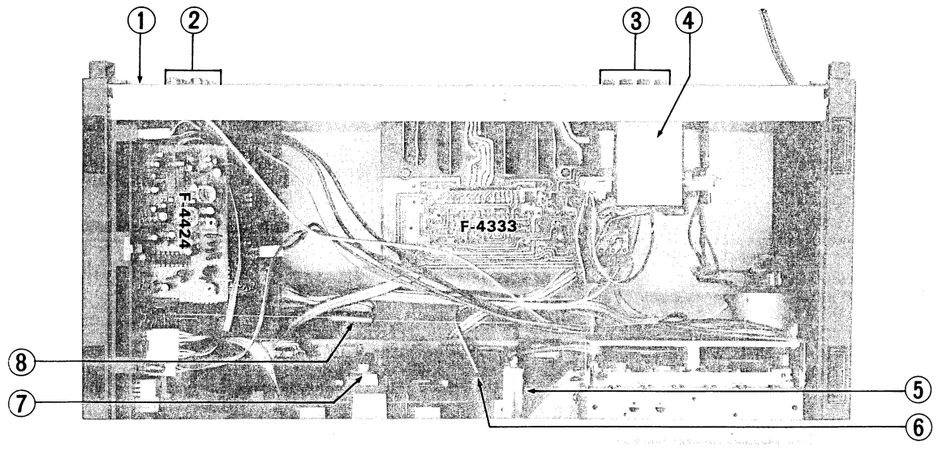
Parts List <Bottom View>

Parts No.	Stock No.	Description
1	46721900	Jack, DC 15 VOLT OUT
2	46363900	6P Input Terminal, TAPE-2, PHONO
3	46549200	SPEAKERS
⚠ 4	15013901	Power Transformer (X, SA)
⚠	15013902	Power Transformer (UL, CSA)
⚠	15013905	Power Transformer (EU, AS)
5	07920600	Relay Pulley
6	47294700	Belt, tape counter
7	46370400	Tape Counter
8	47326700	REC Spring

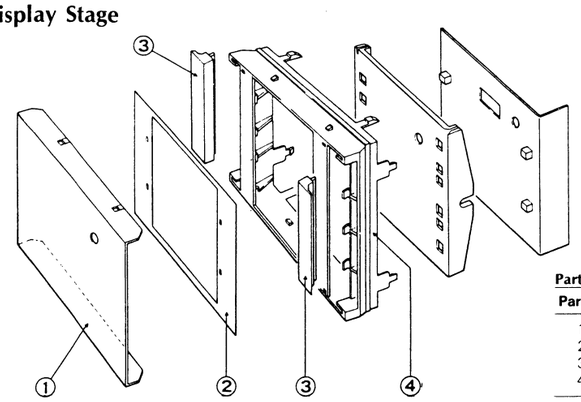
8-2. Top View



8-3. Bottom View



8-4. Display Stage



Parts List <Display Stage>

Parts No.	Stock No.	Description
1	47311500	Display Cover
2	47310200	Display Panel
3	07920200	Dress Knob
4	07921900	Display Holder

9. SCHEMATIC DIAGRAM 9-1. Audio Section

*Design and specifications subject to change without notice for improvement.
*La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
*Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

SYMBOL OF FUNCTION
(i) HEAD AMP
(j) CONTROL AMP
(k) POWER AMP
(m) POWER SUPPLY
(n) AUDIO INDICATOR
(o) SELECTOR
(v) REC AMP
(x) NOISE REDUCTION
(p) FIXED PARTS

SYMBOL
△ Ceramic Capacitor
● Mylar Capacitor
● Styrol Capacitor
□ Non-inflammable Resistor
☑ Fusing Resistor
RESISTORS
All in ohms, 1/4 Watts, ±5% Tolerance
Unless Otherwise Noted k: kΩ, M: MΩ
CAPACITORS
All in μF, Unless Otherwise Noted P:pF
Electrolytic Capacitor:
Capacitance (μF) / Volt (V)
Each D.C. Voltage shows the nominal value in volts at no input signal.

⚠ is Safety Part.
Use only replacement parts recommended by the manufacturer

SWITCHES & CONTROLS
POWER (pS1)
TAPE 1 ON 2 OFF (pS2a,b)
TAPE 2 ON 1 OFF (pS2a,b)
LOUDNESS (pS1a,b)
1 OFF 2 ON
DOLBY NR (pS5)
1 OFF 2 ON
REC MUTE (pS6)
1 OFF 2 ON
TAPE SELECTION (pS3,pS4)

	pS3	pS4
NORMAL	1	1
METAL	2	2

VOLUME (VR1)
BALANCE (VR2a)
BASS (VR2b)
TREBLE (VR2c)
REC (pS1a,g)
I PLAY 2 REC

PHONO Signal Line
REC Signal Line
PLAY Signal Line

2SA1283 2SA1048
2SC2876 2SA1115
2SC3327 2SC2458
DTC124 2SC2603
2SD313AL 2SA1175
2SC2785
2SC2786
2SK117 2SK192
2SK163
M5218L
TD6104P
STK4141
HA1196
HA1197
HA12046
LA1231N
M5218P
NJM4558D
TA7658P
TC9137P
TD6301AP
Dot or Slit or Line
DBA30B
DBB10-B
1S1588TP.3
1S2473T77
10E-2
05Z5.6
05Z6.2
05Z16-Y
05Z20-Y
RD6.2E
RR12-X

 DA-T500/T500L

9-2. Tuner Section <DA-T500>

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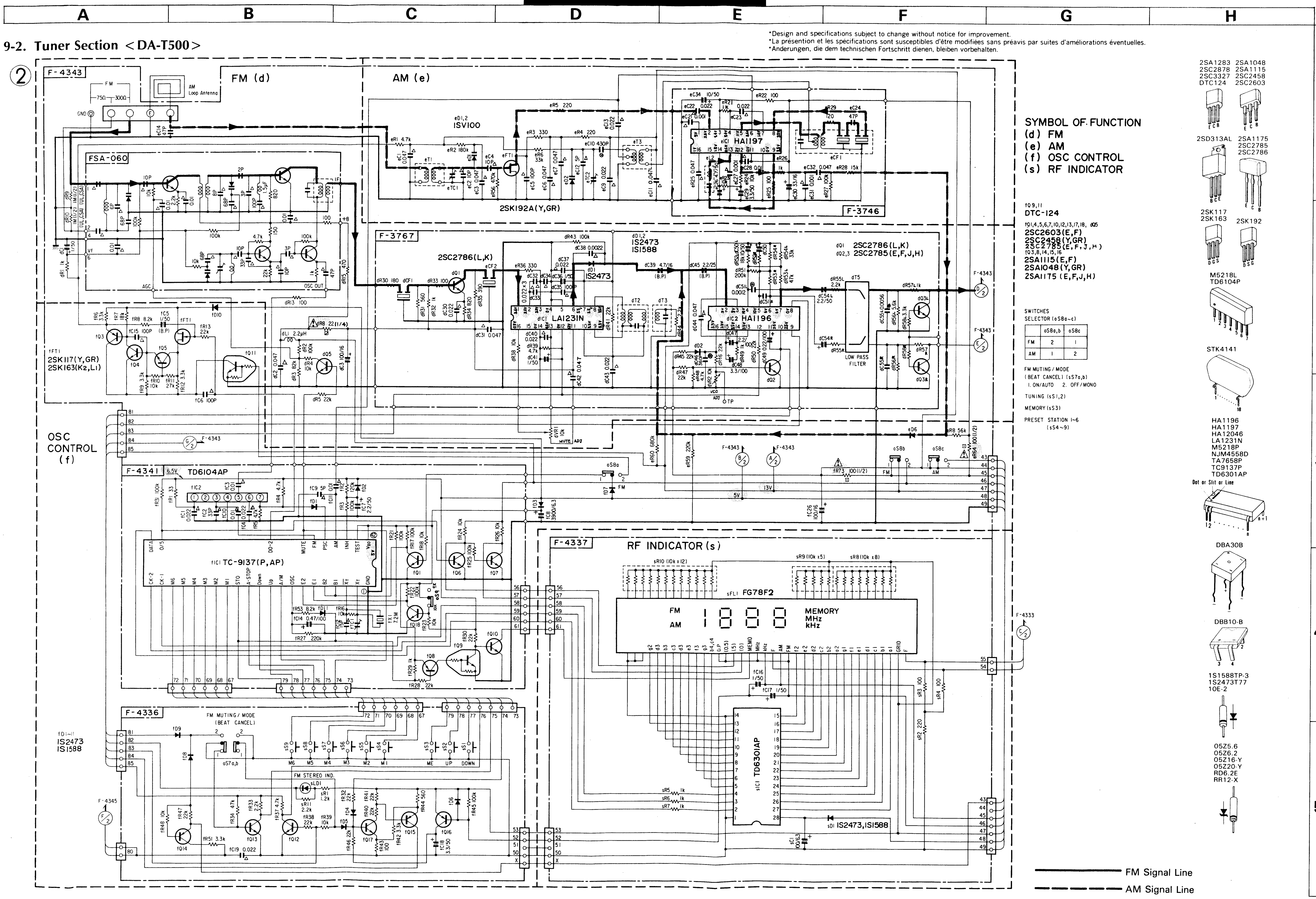
A B C D E F G H
1 2 3 4 5
②
F-4343
FM (d)
AM (e)
AM Loop Antenna
GND
FSA-060
F-3767
F-3746
F-4341
F-4336
F-4337
OSC CONTROL (f)
RF INDICATOR (s)
TD6104AP
fIC1 TC-9137(P,AP)
sFL1 FG78F2
sIC1 TD6301AP
eIC1 HA1197
dIC1 LA1231N
dIC2 HA1196
2SK192A(Y,GR)
2SC2786(L,K)
eD1,2 1SV100
dD1,2 1S2473 1S1588
fFT1 2SK117(Y,GR) 2SK163(K2,L1)
fD1~11 1S2473 1S1588
sD1 1S2473,1S1588
dQ1 2SC2786(L,K)
dQ2,3 2SC2785(E,F,J,H)
LOW PASS FILTER
FM MUTING / MODE (BEAT CANCEL)
FM STEREO IND.
MEMORY
MHz
kHz
SYMBOL OF FUNCTION
(d) FM
(e) AM
(f) OSC CONTROL
(s) RF INDICATOR
fQ9,11
DTC-124
fQ1,4,5,6,7,10,12,13,17,18, dQ5
2SC2603(E,F)
2SC2458(Y,GR)
2SC2785(E,F,J,H)
fQ3,8,14,15,16
2SA1115(E,F)
2SA1048(Y,GR)
2SA1175 (E,F,J,H)
SWITCHES
SELECTOR (oS8a~c)
	oS8a,b	oS8c
FM	2	1
AM	1	2
FM MUTING / MODE
(BEAT CANCEL) (sS7a,b)
1. ON/AUTO 2. OFF/MONO
TUNING (sS1,2)
MEMORY (sS3)
PRESET STATION 1~6
(sS4~9)
2SA1283 2SA1048
2SC2878 2SA1115
2SC3327 2SC2458
DTC124 2SC2603
2SD313AL
2SA1175
2SC2785
2SC2786
2SK117
2SK163
2SK192
M5218L
TD6104P
STK4141
HA1196
HA1197
HA12046
LA1231N
M5218P
NJM4558D
TA7658P
TC9137P
TD6301AP
Dot or Slit or Line
DBA30B
DBB10-B
1S1588TP-3
1S2473T77
10E-2
05Z5.6
05Z6.2
05Z16-Y
05Z20-Y
RD6.2E
RR12-X
FM Signal Line
AM Signal Line

A	B	C	D	E	F	G	H

9-3. Tuner Section <DA-T500L>

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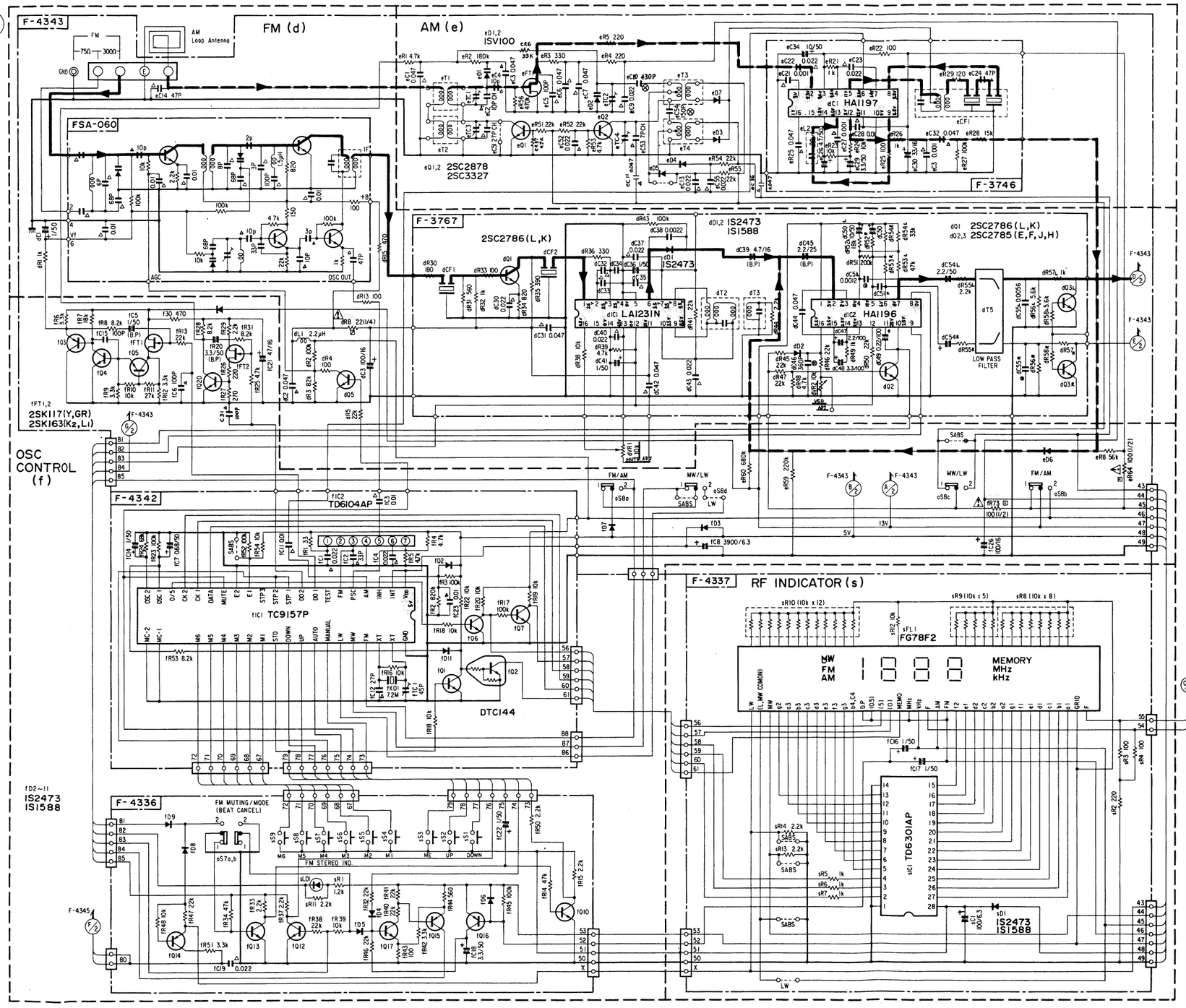


SYMBOL OF FUNCTION
(d) FM
(e) AM
(f) OSC CONTROL
(s) RF INDICATOR

t01,4,5,6,7,10,12,13,17,20 d05
2SC2603(E,F)
2SC2458(Y,GR)
2SC2785(E,F,J,H)
t03,14,15,16
2SA1115(E,F)
2SA1048(Y,GR)
2SA1175(E,F,J,H)

SWITCHES
SELECTOR (s58a,b,c,d)

	s58a,b	s58c,d
FM	2	—
MW	1	1
LW	1	2

FM MUTING/MODE (BEAT CANCEL) (s57a,b)
I. ON/AUTO 2. OFF/MONO
TUNING (s51,2)
MEMORY (s53)
PRESET STATION 1~6 (s54~9)

2SA1283 2SA1048
2SC2878 2SA1115
2SC3327 2SC2458
DTC124 2SC2603

2SD313AL 2SA1175
2SC2785
2SC2786

2SK117
2SK163
2SK192

M5218L
TD6104P

STK4141

HA1196
HA1197
HA12046
LA1231N
M5218P
NJM4558D
TA7658P
TC9137P
TD6301AP

Dot or Slit or Line

DBA30B

DBB10-B

1S1588TP-3
1S2473T77
10E-2

05Z5.6
05Z6.2
05Z16-Y
05Z20-Y
RD6.2E
RR12-X

10. NOTES

When the user moves to different channel step area on FM or AM, the following arrangements must be performed.

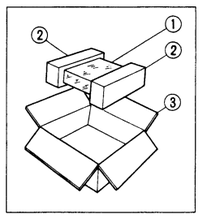
<DA-T500>

	Sets Applicable to	Channel Step Frequency		flC1 (TC9137AP) Input Port Level		Parts	9k/10k Switch oS9
		AM	FM	E_1	E_2	fQ18 (F-4341)	
I	Europe	9kHz	50kHz	H	H	—	None
	America	10kHz	100kHz	L	H	○	None
II	Sets which 9k/10k Switch is installed	9kHz	50kHz	H	H	○	9kHz
		10kHz	100kHz	L	H	○	10kHz

•**Note:** 1) L=Low Level, H=High Level, ○=Connect, —=Remove
2) oS9=AM 9k/10k Switch on F-4341

11. PACKING LIST

Parts No.	Stock No.	Description
1	47327400	Vinyl Cover
2	47327500	Styrofoam Packing
3	47323600	Carton Case (DA-T500, Silver)
	47323700	Carton Case (DA-T500, Black)
	47327600	Carton Case (DA-T500L, Silver)
	47327700	Carton Case (DA-T500L, Black)



12. ACCESSORY LIST

Parts List

Stock No.	Description
46051700	FM Antenna
46186100	Loop Antenna
07563000	Antenna Holder
46728500	Operating Instruction (DA-T500/DA-P500)
46728600	Operating Instruction (DA-T500L/DA-P500)

Sansui

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